

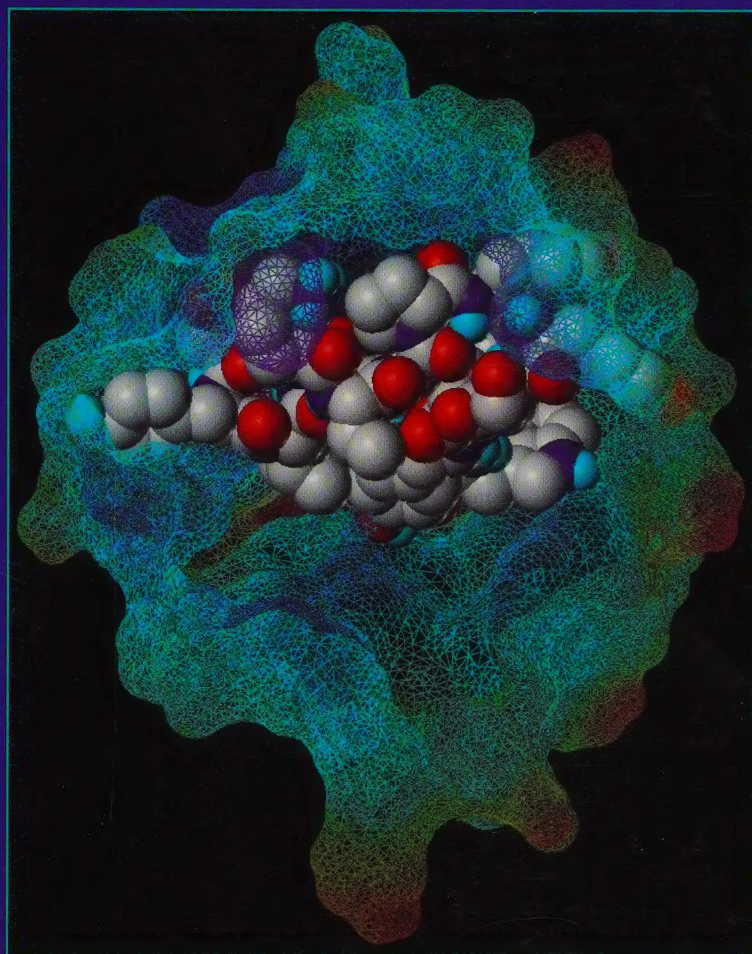
BBRCA9

ISSN 0006-291X

**2002 Index Issue**

Cumulative Indexes for Volumes 290-299

# Biochemical and Biophysical Research Communications



## EDITORS

Wolfgang Baumeister  
Ernesto Carafoli  
Chin Ha Chung  
André Goffeau  
I. C. Gunsalus  
Akira Ichihara  
James D. Jamieson  
Claude Klee  
M. Daniel Lane  
William J. Lennarz  
Masami Muramatsu  
Tsuneo Omura  
Sten Orrenius  
Jacques Pouyssegur  
William S. Reznikoff  
Kiyoshi Takatsu  
Naoyuki Taniguchi  
Robert J. P. Williams

QH  
301  
.B358

Also available on

SCIENCE @ DIRECT®

[www.sciencedirect.com](http://www.sciencedirect.com)



ACADEMIC PRESS

An imprint of Elsevier Science



# BIOCHEMICAL AND BIOPHYSICAL

## Research Communications

*Manuscripts should be sent to one of the following Editors:*

### Wolfgang Baumeister

Abteilung Molekulare Strukturbioogie  
Max-Planck-Institut für Biochemie  
Am Klopferspitz 18a  
DE-82152 Martinsried, Germany  
Fax: +49-89-8578-2641  
E-mail: baumeist@biochem.mpg.de

### Ernesto Carafoli

Dipartimento di Chimica Biologica  
Università degli Studi di Padova  
Viale Giovanni Colombo 3  
Padua IT-35121, Italy  
Fax: 39-049-827-6125  
E-mail: carafoli@civ.bio.unipd.it

### Chin Ha Chung

School of Biological Sciences  
College of Natural Sciences  
Seoul National University  
Seoul 151-742, Republic of Korea  
Fax: 82-2-872-1993  
E-mail: chchung@snu.ac.kr

### André Goffeau

Université catholique de Louvain  
FYSA: Unité de biochimie physiologique  
Place Croix du Sud 2 (bte 20)  
BE-1348 Louvain-La-Neuve, Belgium  
Fax: 32-10-47-38-72  
E-mail: goffeau@fysa.ucl.ac.be

### I. C. Gunsalus

Environmental Research Laboratory  
U.S. EPA  
1 Sabine Island Drive, Building #54  
Gulf Breeze, Florida 32561-5299  
Fax: (850) 981-9789  
E-mail: theowls@bellsouth.net

### Akira Ichihara

2-7-55 Minamiyaso  
Tokushima 770-0005, Japan  
Fax: 81-886-32-4104  
E-mail: a.ichihara@mb.newweb.ne.jp

### James D. Jamieson

MD/PhD Program  
Room 317 ESH, 367 Cedar Street  
Yale University School of Medicine  
New Haven, Connecticut 06510-3219  
Fax: (203) 785-6936  
E-mail: james.jamieson@yale.edu

### Claude Klee

Laboratory of Biochemistry  
National Cancer Institute  
National Institutes of Health  
Building 37, Room 6106  
37 Convent Drive, MSC 4255  
Bethesda, Maryland 20892-4255  
Fax: (301) 402-3095  
E-mail: ckl@helix.nih.gov

### M. Daniel Lane

Department of Biological Chemistry  
The Johns Hopkins University  
725 North Wolfe Street  
Baltimore, Maryland 21205-2105  
Fax: (410) 955-0903  
E-mail: lanebbrc1@bs.jhmi.edu

### William J. Lennarz

Department of Biochemistry and  
Cell Biology  
450 Life Sciences Building  
State University of New York  
at Stony Brook  
Stony Brook, New York 11794-5215  
Fax: (631) 632-8575  
E-mail: wlennarz@notes.cc.sunysb.edu

### Masami Muramatsu

Research Center for Genomic Medicine  
Saitama Medical School  
1397-1 Yamane, Hidaka-shi  
Saitama 350-1241, Japan  
Fax: 81-429-85-7191  
E-mail: muramasa@saitama-med.ac.jp

### Tsuneo Omura

7-17-7 Hinosato, Munakata  
Fukuoka 811-3425, Japan  
Fax: 81-940-36-2962  
E-mail: omurat@mxs.mesh.ne.jp

### Sten Orrenius

Institute of Environmental Medicine  
Karolinska Institute  
Nobels Väg 13  
Stockholm, Sweden SE-171 77  
Fax: 46-832-9041  
E-mail: sten.orrenius@imm.ki.se

### Jacques Pouyssegur

UMR 6543 CNRS  
Centre Antoine Lacassagne  
33 avenue Valombrose  
06108 Nice Cédex 2, France  
Fax: 33-492-03-12-25  
E-mail: pouysseg@unice.fr

### William S. Reznikoff

Department of Biochemistry  
University of Wisconsin-Madison  
Biochemistry Addition  
433 Babcock Drive  
Madison, Wisconsin 53706-1544  
Fax: (608) 262-3453  
E-mail: wsrez@biochem.wisc.edu

### Kiyoshi Takatsu

Department of Immunology  
Institute of Medical Science  
University of Tokyo  
4-6-1 Shirokanedai, Minato-ku  
Tokyo 108-8639, Japan

### Naoyuki Taniguchi

Department of Biochemistry  
Graduate School of Medicine  
Osaka University Medical School  
2-2 Yamadoka, Room B-1  
Suita, Osaka 565-0871, Japan  
Fax: 81-6-6879-3429  
E-mail: naoyukitani@biochem.med.  
osaka-u.ac.jp

### Robert J. P. Williams

Inorganic Chemistry Laboratory  
University of Oxford  
South Parks Road  
Oxford OX1 3QR, United Kingdom  
Fax: 44-1865-272690  
E-mail: bob.williams@chem.ox.ac.uk

*Correspondence regarding production may be sent to:*

### Biochemical and Biophysical Research Communications

525 B Street, Suite 1900, San Diego, California 92101-4495, USA  
Telephone (619) 699-6506, Fax (619) 699-6700, E-mail bbrc@elsevier.com

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS

(ISSN 0006-291X)

Published weekly by Elsevier Science

Editorial and Production Offices: 525 B Street, Suite 1900, San Diego, CA 92101-4495, USA

Accounting and Circulation Offices: 6277 Sea Harbor Drive, Orlando, FL 32887-4900, USA

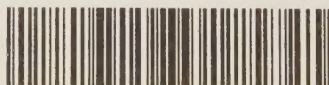
2003: Volumes 300-312. Price: \$4578.00

All prices include postage and handling.

All correspondence and subscription orders should be addressed to the office of the Publishers at 6277 Sea Harbor Drive, Orlando, FL 32887-4900, USA (telephone: 407-345-2000). Send notices of change of address to the office of the Publishers at least 6 to 8 weeks in advance. Please include both old and new addresses. POSTMASTER: Send change of address to *Biochemical and Biophysical Research Communications*, 6277 Sea Harbor Drive, Orlando, FL 32887-4900, USA.

Periodicals postage paid at Orlando, FL, and at additional mailing offices.

© 2003 Elsevier Science (USA)



0006-291X(2002);1-7



Biochemical  
and Biophysical  
Research  
Communications

EDITORS

Wolfgang Baumeister  
Ernesto Carafoli  
Chin Ha Chung  
André Goffeau  
I. C. Gunsalus  
Akira Ichihara  
James D. Jamieson  
Claude Klee  
M. Daniel Lane  
William J. Lennarz  
Masami Muramatsu  
Tsuneo Omura  
Sten Orrenius  
Jacques Pouyssegur  
William S. Reznikoff  
Kiyoshi Takatsu  
Naoyuki Taniguchi  
Robert J. P. Williams

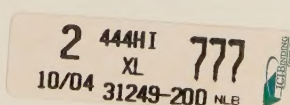
2002 Index Issue

Cumulative Indexes for Volumes 290–299



ACADEMIC PRESS

An imprint of Elsevier Science





# **BIOCHEMICAL AND BIOPHYSICAL**

## ***Research Communications***

© 2003 Elsevier Science (USA). All rights reserved.

This journal and the individual contributions contained in it are protected under copyright by Elsevier Science (USA), and the following terms and conditions apply to their use:

### **Photocopying**

Single photocopies of single articles may be made for personal use as allowed by national copyright laws. Permission of the Publisher and payment of a fee are required for all other photocopying, including multiple or systematic copying, copying for advertising or promotional purposes, resale, and all forms of document delivery. Special rates are available for educational institutions that wish to make photocopies for nonprofit educational classroom use.

Permissions may be sought directly from Elsevier Science Global Rights Department, P.O. Box 800, Oxford OX5 1DX, UK; phone: (+44) 1865 843830; fax: (+44) 1865 853333; e-mail: [permissions@elsevier.co.uk](mailto:permissions@elsevier.co.uk). You may also contact Global Rights directly through Elsevier's home page (<http://www.elsevier.com/homepage/support/>) by selecting "Obtaining Permissions."

In the USA, users may clear permissions and make payments through the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA; phone: (978) 750-8400; fax: (978) 750-4744; and in the UK through the Copyright Licensing Agency Rapid Clearance Service (CLARCS), 90 Tottenham Court Road, London W1P 0LP, UK; phone: +44 (0)20 7631 5555; fax: +44 (0)20 7631 5500. Other countries may have a local reprographic rights agency for payments.

### **Derivative Works**

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution.

Permission of the Publisher is required for all other derivative works, including compilations and translations.

### **Electronic Storage or Usage**

Permission of the Publisher is required to store or use electronically any material contained in this journal, including any article or part of an article.

Except as outlined above, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission of the Publisher.

Address permission requests to the Global Rights Department at the mail, fax, and e-mail addresses noted above.

### **Notice**

No responsibility is assumed by the Publisher for any injury and/or damage to persons or property as a matter of product liability, negligence, or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made.

Although all advertising material is expected to conform to ethical (medical) standards, inclusion in this publication does not constitute a guarantee or endorsement of the quality or value of such product or of the claims made of it by its manufacturer.

0006-291X/03 \$30.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.





**BIOCHEMICAL AND BIOPHYSICAL**  
***Research Communications***

**2002 Index Issue**

Cumulative Indexes for Volumes 290–299

|                                                        |    |
|--------------------------------------------------------|----|
| Cumulative Table of Contents for Volumes 290–299 ..... | v  |
| Cumulative Author Index for Volumes 290–299 .....      | 1  |
| Cumulative Subject Index for Volumes 290–299 .....     | 39 |





Digitized by the Internet Archive  
in 2026





ACADEMIC  
PRESS

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SCIENCE @ DIRECT®

Biochemical and Biophysical Research Communications 290–299 (2003) v–clxiv

BBRC

[www.elsevier.com/locate/ybbrc](http://www.elsevier.com/locate/ybbrc)

## Cumulative Table of Contents for Volumes 290–299

Volume 290, Number 1, January 11, 2002

### BREAKTHROUGHS AND VIEWS

- |                                                                             |                                                     |   |
|-----------------------------------------------------------------------------|-----------------------------------------------------|---|
| Molecular Regulation of Muscle Cachexia: It May Be More Than the Proteasome | Per-Olof Hasselgren, Curtis Wray, and Joshua Mammen | 1 |
|-----------------------------------------------------------------------------|-----------------------------------------------------|---|

### REGULAR ARTICLES

- |                                                                                                                                      |                                                                                                                                                      |    |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| c-myc Suppression in Burkitt's Lymphoma Cells                                                                                        | Tomas Simonsson and Marie Henriksson                                                                                                                 | 11 |
| Mononucleosomes Assembled on a DNA Fragment Containing (GGA/TCC) <sub>n</sub> Repeats Can Form a DNA–DNA Complex                     | Akira Yoshimura, Kiyoe Ura, Hitoshi Asakura, Ryo Kominami, and Yukio Mishima                                                                         | 16 |
| Fluorescence Imaging of Metabolic Responses in Single Mitochondria                                                                   | Satoshi Nakayama, Takanori Sakuyama, Shigeki Mitaku, and Yoshihiro Ohta                                                                              | 23 |
| <i>Trypanosoma cruzi</i> Uses a 45-kDa Mucin for Adhesion to Mammalian Cells                                                         | Corey W. Turner, Maria F. Lima, and Fernando Villalta                                                                                                | 29 |
| AP180 Binds to the C-Terminal SH2 Domain of Phospholipase C- $\gamma$ 1 and Inhibits Its Enzymatic Activity                          | Seung Jin Han, Jung Hyun Lee, Seung Hwan Hong, Sang Dai Park, Chul Geun Kim, Min Dong Song, Tae Kyu Park, and Chan Gil Kim                           | 35 |
| Protein Kinase C Is a Mediator of the Synthesis and Secretion of Osteoprotegerin in Osteoblast-like Cells                            | Xuhao Yang, David Halladay, Jude E. Onyia, T. John Martin, and Srinivasan Chandrasekhar                                                              | 42 |
| Direct Antioxidant Properties of Creatine                                                                                            | John M. Lawler, William S. Barnes, Gaoyao Wu, Wook Song, and Scott Demaree                                                                           | 47 |
| Effect of the Rabbit $\alpha$ s1-Casein Gene Distal Enhancer on the Expression of a Reporter Gene <i>in Vitro</i> and <i>in Vivo</i> | Thais Pantano, Geneviève Jolivet, Sonia Prince, Celeste Menck-Le Bourhis, Caroline Maeder, Céline Viglietta, Sylvie Rival, and Louis-Marie Houdebine | 53 |



|                                                                                                                                                               |                                                                                                                                                                                   |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Purification and Characterization of Methionine Sulfoxide Reductases from Mouse and <i>Staphylococcus aureus</i> and Their Substrate Stereospecificity        | Jackob Moskovitz, Vineet K. Singh, Jesus Requena, Brian J. Wilkinson, Radheshyam K. Jayaswal, and Earl R. Stadtman                                                                | 62  |
| Analysis of the Gene Expression Profiles of Immature versus Mature Bone Marrow-Derived Dendritic Cells Using DNA Arrays                                       | Zhuang Chen, John R. Gordon, Xueshu Zhang, and Jim Xiang                                                                                                                          | 66  |
| Differential Expression of the Isoforms for the Monocyte Chemoattractant Protein-1 Receptor, CCR2, in Monocytes                                               | Seiya Tanaka, Simone R. Green, and Oswald Quehenberger                                                                                                                            | 73  |
| Base Frequencies at the Second Codon Position of <i>Vibrio cholerae</i> Genes Connect with Protein Function                                                   | Ju Wang and Feng-Biao Guo                                                                                                                                                         | 81  |
| PKC $\zeta$ Enhances Insulin-like Growth Factor 1-Dependent Mitogenic Activity in the Rat Clonal $\beta$ Cell Line RIN 1046-38                                | Anita M. Hennige, Andreas Fritsche, Volker Strack, Cora Weigert, Harald Mischak, Patricia Borboni, Walter Renn, Hans-Ulrich Häring, and Monika Kellerer                           | 85  |
| Autocrine and Paracrine Regulation of Lymphocyte CB2 Receptor Expression by TGF- $\beta$                                                                      | Brian Gardner, Li X. Zu, Sherven Sharma, Qian Liu, Alexandros Makriyannis, Donald P. Tashkin, and Steven M. Dubinett                                                              | 91  |
| NO Synthesis, Unlike Respiration, Influences Intracellular Oxygen Tension                                                                                     | Jerome Coste, Jean-Claude Vial, Gilles Faury, Alain Deronzier, Yves Usson, Michel Robert-Nicoud, and Jean Verdeti                                                                 | 97  |
| Domains I and II in the 5' Nontranslated Region of the HCV Genome Are Required for RNA Replication                                                            | Yoon Ki Kim, Chon Saeng Kim, Song Hee Lee, and Sung Key Jang                                                                                                                      | 105 |
| FGFR3 Isoforms Have Distinct Functions in the Regulation of Growth and Cell Morphology                                                                        | Akio Shimizu, Yuji Takashima, and Misuzu Kurokawa-Seo                                                                                                                             | 113 |
| Inhibitors of Fibril Formation and Cytotoxicity of $\beta$ -Amyloid Peptide Composed of KLVFF Recognition Element and Flexible Hydrophilic Disrupting Element | Ken-ichi Watanabe, Kazuhiko Nakamura, Shingo Akikusa, Tomoko Okada, Masato Kodaka, Takeo Konakahara, and Hiroaki Okuno                                                            | 121 |
| NO-Steroids: Potent Anti-inflammatory Drugs with Bronchodilating Activity <i>in Vitro</i>                                                                     | Dominique Tallet, Piero Del Soldato, Nicole Oudart, and Jean-Luc Burgaud                                                                                                          | 125 |
| Fibrate and Statin Synergistically Increase the Transcriptional Activities of PPAR $\alpha$ /RXR $\alpha$ and Decrease the Transactivation of NF $\kappa$ B   | Ikuo Inoue, Fumiaki Itoh, Shigemi Aoyagi, Shigeki Tazawa, Hiroshi Kusama, Masuo Akahane, Toshiyuki Mastunaga, Kenji Hayashi, Takuya Awata, Tugikazu Komoda, and Sigehiro Katayama | 131 |
| High Levels of RAE-1 Isoforms on Mouse Tumor Cell Lines Assessed by Anti-"pan" RAE-1 Antibody Confer Tumor Susceptibility to NK Cells                         | Hisayo Masuda, Yoshiko Saeki, Midori Nomura, Kyoko Shida, Misako Matsumoto, Michio Ui, Lewis L. Lanier, and Tsukasa Seya                                                          | 140 |



|                                                                                                                                                             |                                                                                                                                |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------|
| Expression and Characterization of Minican, a Recombinant Syndecan-1 with Extensively Truncated Core Protein                                                | <b>Leif Viklund, Britt-Marie Loo, Jorma Hermonen, Kamel El-Darwish, Markku Jalkanen, and Markku Salmivirta</b>                 | <b>146</b> |
| Side Chain Modifications Change the Binding and Agonist Properties of Endomorphin 2                                                                         | <b>I. Lengyel, G. Orosz, D. Biyashev, L. Kocsis, M. Al-Khrasani, A. Rónai, Cs. Tömböly, Zs. Fürst, G. Tóth, and A. Borsodi</b> | <b>153</b> |
| Augmentation of Receptor-Mediated Adenylyl Cyclase Activity by Gi-Coupled Prostaglandin Receptor Subtype EP3 in a $G\beta\gamma$ Subunit-Independent Manner | <b>Noriyuki Hatae, Kumiko Yamaoka, Yukihiro Sugimoto, Manabu Negishi, and Atsushi Ichikawa</b>                                 | <b>162</b> |
| Fibroblast Growth Factor 5 Inhibits Hair Growth by Blocking Dermal Papilla Cell Activation                                                                  | <b>Yutaka Ota, Yuko Saitoh, Satoshi Suzuki, Kazuo Ozawa, Mitsuko Kawano, and Toru Imamura</b>                                  | <b>169</b> |
| High Glucose Induced VEGF Expression via PKC and ERK in Glomerular Podocytes                                                                                | <b>Sachi Hoshi, Ken-ichi Nomoto, Junro Kuromitsu, Shinsuke Tomari, and Michio Nagata</b>                                       | <b>177</b> |
| Boswellic Acids Activate $p42^{MAPK}$ and $p38$ MAPK and Stimulate $Ca^{2+}$ Mobilization                                                                   | <b>Anja Altmann, Lutz Fischer, Manfred Schubert-Zsilavecz, Dieter Steinhilber, and Oliver Werz</b>                             | <b>185</b> |
| Insertion of Dibasic Residues Directs a Constitutive Protein to the Regulated Secretory Pathway                                                             | <b>Sylvain Féliciangéli and Patrick Kitabgi</b>                                                                                | <b>191</b> |
| Integral Role of the EGF Receptor in HGF-Mediated Hepatocyte Proliferation                                                                                  | <b>Lawrence A. Scheving, Mary C. Stevenson, Jonathan M. Taylormoore, Peter Traxler, and William E. Russell</b>                 | <b>197</b> |
| Structural Studies of Porcine Myeloid Antibacterial Peptide PMAP-23 and Its Analogues in DPC Micelles by NMR Spectroscopy                                   | <b>Kyoungsoo Park, Donghoon Oh, Song Yub Shin, Kyung-Soo Hahm, and Yangmee Kim</b>                                             | <b>204</b> |
| Modulation of Iron Regulatory Protein-1 by Various Metals                                                                                                   | <b>Satoru Oshiro, Koji Nozawa, Makoto Hori, Chun Zhang, Yoshinori Hashimoto, Shigetaka Kitajima, and Ken-ichi Kawamura</b>     | <b>213</b> |
| Endogenous Anti-inflammatory Mediators from Arachidonate in Human Neutrophils                                                                               | <b>I. Vachier, P. Chanez, C. Bonnans, P. Godard, J. Bousquet, and C. Chavis</b>                                                | <b>219</b> |
| Physical Interactions of Dmnk with Orb: Implications in the Regulated Localization of Orb by Dmnk during Oogenesis and Embryogenesis                        | <b>Kenji Iwai, Isao Oishi, Xiao Zhou Xu, Yasuhiro Minami, and Hirohei Yamamura</b>                                             | <b>225</b> |
| Characterization of the Mouse Peroxisome Proliferator-Activated Receptor $\delta$ Gene                                                                      | <b>S. S. Magge and H. M. Guardiola-Diaz</b>                                                                                    | <b>230</b> |
| Human Lactoferrin Activates Transcription of IL-1 $\beta$ Gene in Mammalian Cells                                                                           | <b>Kyung-No Son, Junbae Park, Chan-Keun Chung, Dae K. Chung, Dae-Yeul Yu, Kyung-Kwang Lee, and Jiyoung Kim</b>                 | <b>236</b> |



|                                                                                                                                                                |                                                                                                                                                                                       |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| TT Virus Is Distributed in Various Leukocyte Subpopulations at Distinct Levels, with the Highest Viral Load in Granulocytes                                    | Masaharu Takahashi, Shinichi Asabe, Yuhko Gotanda, Junichi Kishimoto, Fumio Tsuda, and Hiroaki Okamoto                                                                                | 242 |
| Prostaglandin E <sub>2</sub> Stimulates Prostatic Intraepithelial Neoplasia Cell Growth through Activation of the Interleukin-6/GP130/STAT-3 Signaling Pathway | Xin-Hua Liu, Alexander Kirschenbaum, Min Lu, Shen Yao, Adam Klausner, Chad Preston, James F. Holland, and Alice C. Levine                                                             | 249 |
| Regulation of the Rat SREBP-1c Promoter in Primary Rat Hepatocytes                                                                                             | Xiong Deng, Lauren M. Cagen, Henry G. Wilcox, Edwards A. Park, Rajendra Raghov, and Marshall B. Elam                                                                                  | 256 |
| 5-Amino-4-imidazolecarboxamide Riboside Confers Strong Tolerance to Glucose Starvation in a 5'-AMP-Activated Protein Kinase-Dependent Fashion                  | Koichi Hashimoto, Kazuyoshi Kato, Kazuhiro Imamura, Atsuhiko Kishimoto, Hiroyuki Yoshikawa, Yuuji Taketani, and Hiroyasu Esumi                                                        | 263 |
| Actin Cytoskeleton Is Required for Early Apoptosis Signaling Induced by Anti-Fas Antibody but Not Fas Ligand in Murine B Lymphoma A20 Cells                    | Masashige Bando, Yasunobu Miyake, Masashi Shiina, Masaaki Wachi, Kazuo Nagai, and Takao Kataoka                                                                                       | 268 |
| Comparative Carcinogenicity of Picene and Dibenz[ <i>a,h</i> ]anthracene in the Rat                                                                            | James W. Flesher, Jamie Horn, and Andreas F. Lehner                                                                                                                                   | 275 |
| A Novel Isoform of Vertebrate Ancient Opsin in a Smelt Fish, <i>Plecoglossus altivelis</i>                                                                     | Toshifumi Minamoto and Isamu Shimizu                                                                                                                                                  | 280 |
| Functional Expression and Characterization of <i>Aedes aegypti</i> Dopachrome Conversion Enzyme                                                                | Jianmin Fang, Qian Han, Jody K. Johnson, Bruce M. Christensen, and Jianyong Li                                                                                                        | 287 |
| Cobalt- and Nickel-Binding Property of Cullin-2                                                                                                                | Koichi Kanaya, Ah-Lim Tsai, and Tetsu Kamitani                                                                                                                                        | 294 |
| <i>In Vitro</i> Self-Assembled HCV Core Virus-like Particles Induce a Strong Antibody Immune Response in Sheep                                                 | Nelson Acosta-Rivero, Julio C. Alvarez-Obregón, Alexis Musacchio, Viviana Falcón, Santiago Dueñas-Carrera, Jeny Marante, Ivón Menéndez, and Juan Morales                              | 300 |
| Production of Soluble Integrin $\alpha 2\beta 1$ Heterodimer Complex Functionally Active <i>in Vitro</i> and <i>in Vivo</i>                                    | Mie Kainoh and Toshiaki Tanaka                                                                                                                                                        | 305 |
| Class VI Myosin Moves Processively along Actin Filaments Backward with Large Steps                                                                             | So Nishikawa, Kazuaki Homma, Yasunori Komori, Mitsuhiro Iwaki, Tetsuichi Wazawa, Atsuko Hikikoshi Iwane, Junya Saito, Reiko Ikebe, Eisaku Katayama, Toshio Yanagida, and Mitsuo Ikebe | 311 |
| An <i>in Vivo</i> Pilot Study Characterizing the New CYP2A6*7, *8, and *10 Alleles                                                                             | C. Xu, Y. S. Rao, B. Xu, E. Hoffmann, J. Jones, E. M. Sellers, and R. F. Tyndale                                                                                                      | 318 |
| Oxygen Tension Regulates the Maturation of the Blood-Brain Barrier                                                                                             | Hyun Seok Song, Myung Jin Son, You Mie Lee, Woo Jean Kim, Sae-Won Lee, Chul Woo Kim, and Kyu-Won Kim                                                                                  | 325 |



|                                                                                                                                                    |                                                                                                                                      |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----|
| Utilizing Chimeric Proteins for Exploring the Cellular Fate of Endogenous Proteins                                                                 | Ahmi Ben-Yehudah, Rami Aqeilan, Ruth Belostotsky, Yehudith Azar, and Haya Lorberboum-Galski                                          | 332 |
| Salt Stress and Hyperosmotic Stress Regulate the Expression of Different Sets of Genes in <i>Synechocystis</i> sp. PCC 6803                        | Yu Kanesaki, Iwane Suzuki, Suleyman I. Allakhverdiev, Koji Mikami, and Norio Murata                                                  | 339 |
| TGF- $\alpha$ -Driven Tumor Growth Is Inhibited by an EGF Receptor Tyrosine Kinase Inhibitor                                                       | A. El-Obeid, G. Hesselager, B. Westermark, and M. Nistér                                                                             | 349 |
| Subcellular Localization, Oligomerization, and ATP-Binding of <i>Caenorhabditis elegans</i> CED-4                                                  | Barbara M. Seiffert, Juliane Vier, and Georg Häcker                                                                                  | 359 |
| Effects of <i>N</i> /2 Missense Mutations on Schwannomin Interactions                                                                              | Daniel R. Scoles, Mercy Chen, and Stefan-M. Pulst                                                                                    | 366 |
| Dimerization of Phospholipase D Isozymes                                                                                                           | Yoonseok Kam and John H. Exton                                                                                                       | 375 |
| Genome-wide Screening by cDNA Microarray of Genes Associated with Matrix Mineralization by Human Mesenchymal Stem Cells <i>in Vitro</i>            | Mitsuhito Doi, Akira Nagano, and Yusuke Nakamura                                                                                     | 381 |
| Multiple Substrates for Paraoxonase-1 during Oxidation of Phosphatidylcholine by Peroxynitrite                                                     | Zakaria Ahmed, Amir Ravandi, Graham F. Maguire, Andrew Emili, Dragomir Draganov, Bert N. La Du, Arnis Kuksis, and Philip W. Connelly | 391 |
| Measuring $\beta$ -Galactosidase Activity in Bacteria: Cell Growth, Permeabilization, and Enzyme Assays in 96-Well Arrays                          | Kevin L. Griffith and Richard E. Wolf Jr.                                                                                            | 397 |
| Paternal Expression of a Novel Imprinted Gene, <i>Peg12/Frat3</i> , in the Mouse 7C Region Homologous to the Prader-Willi Syndrome Region          | Shin Kobayashi, Takashi Kohda, Hitoshi Ichikawa, Atsuo Ogura, Misao Ohki, Tomoko Kaneko-Ishino, and Fumitoshi Ishino                 | 403 |
| Role for O-Glycosylation of RFP in the Interaction with Enhancer of Polycomb                                                                       | Gaye Tezel, Yohei Shimono, Yoshiki Murakumo, Kumi Kawai, Toshifumi Fukuda, Naoko Iwahashi, and Masahide Takahashi                    | 409 |
| REST4-Mediated Modulation of REST/NRSF-Silencing Function during BDNF Gene Promoter Activation                                                     | Akiko Tabuchi, Tomoko Yamada, Shoko Sasagawa, Yoshihisa Naruse, Nozomu Mori, and Masaaki Tsuda                                       | 415 |
| The Flexible C-Terminal Region of <i>Aspergillus terreus</i> Blastocidin S Deaminase: Identification of Its Functional Roles with Deletion Enzymes | Makoto Kimura, Makio Furuichi, Masaki Yamamoto, Takashi Kumasaka, Hiroshi Mizuno, Masashi Miyano, and Isamu Yamaguchi                | 421 |
| A Study on the C-Terminal Membrane Anchoring of <i>Escherichia coli</i> Penicillin-Binding Protein 5                                               | K. Brandenburg, F. Harris, D. A. Phoenix, and U. Seydel                                                                              | 427 |
| Alternative Splicing Determines the Domain Structure of WWP1, a Nedd4 Family Protein                                                               | Marzena Flasz, Patricia Gorman, Rebecca Roylance, Ann E. Canfield, and Martin Baron                                                  | 431 |



|                                                                                                                                                               |                                                                                                                                                                                             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Expression of Fc $\alpha/\mu$ Receptor by Human Mesangial Cells: A Candidate Receptor for Immune Complex Deposition in IgA Nephropathy                        | <b>Kenneth J. McDonald, Angus J. M. Cameron, Janet M. Allen, and Alan G. Jardine</b>                                                                                                        | <b>438</b> |
| Cell Surface Trafficking of Fas in NIT-1 Cells and Dissection of Surface and Total Fas Expression                                                             | <b>P. Augstein, A. Dunger, C. Salzsieder, P. Heinke, R. Kubernath, J. Bahr, U. Fischer, R. Rettig, and E. Salzsieder</b>                                                                    | <b>443</b> |
| Identification of a Novel Protease Inhibitor Gene That Is Highly Expressed in the Prostate                                                                    | <b>Åke Lundwall and Adam Clauss</b>                                                                                                                                                         | <b>452</b> |
| Soybean Ascorbate Peroxidase Suppresses Bax-Induced Apoptosis in Yeast by Inhibiting Oxygen Radical Generation                                                | <b>Haejeong Moon, Dongwon Baek, Boyoung Lee, D. Theertha Prasad, Sang Yeol Lee, Moo Je Cho, Chae Oh Lim, Myung Suk Choi, Jeongdong Bahk, Myeong Ok Kim, Jong Chan Hong, and Dae-Jin Yun</b> | <b>457</b> |
| Phosphorylation of Recombinant Human Spermidine/Spermine $N^1$ -Acetyltransferase by CK1 and Modulation of Its Binding to Mitochondria: A Comparison with CK2 | <b>Luciana Bordin, Cristina Vargiu, Giulio Clari, Anna Maria Brunati, Sebastiano Colombatto, Mauro Salvi, Maria Angelica Grillo, and Antonio Toninello</b>                                  | <b>463</b> |
| Proteasome Inhibitors Activate the Transcription Factors C/EBP- $\beta$ and $\delta$ in Human Intestinal Epithelial Cells                                     | <b>Eric S. Hungness, Bruce W. Robb, Guang-ju Luo, Timothy A. Pritts, Dan D. Hershko, and Per-Olof Hasselgren</b>                                                                            | <b>469</b> |
| Exogenously Administered HGF Activator Augments Liver Regeneration through the Production of Biologically Active HGF                                          | <b>Masaki Kaibori, Tomohisa Inoue, Michio Oda, Daiji Naka, Toshiya Kawaguchi, Naomi Kitamura, Keiji Miyazawa, A-Hon Kwon, Yasuo Kamiyama, and Tadayoshi Okumura</b>                         | <b>475</b> |
| Differential Gene Expression of Organic Anion Transporters in Male and Female Rats                                                                            | <b>Yasuna Kobayashi, Noriko Hirokawa, Naomi Ohshiro, Takashi Sekine, Tadanori Sasaki, Shogo Tokuyama, Hitoshi Endou, and Toshinori Yamamoto</b>                                             | <b>482</b> |
| Effect of Protein Kinase C on Endoplasmic Reticulum Cholesterol                                                                                               | <b>Yvonne Lange, Jin Ye, and Theodore L. Steck</b>                                                                                                                                          | <b>488</b> |
| Subsites of Trypsin Active Site Favor Catalysis or Substrate Binding                                                                                          | <b>S. R. Marana, A. R. Lopes, L. Juliano, M. A. Juliano, C. Ferreira, and Walter R. Terra</b>                                                                                               | <b>494</b> |
| DNA Microarray Analyses of Genes Elicited by Ultrasound in Human U937 Cells                                                                                   | <b>Yoshiaki Tabuchi, Takashi Kondo, Ryohei Ogawa, and Hidemi Mori</b>                                                                                                                       | <b>498</b> |
| ZK 156718, a Low Calcemic, Antiproliferative, and Prodifferentiating Vitamin D Analog                                                                         | <b>Tanja Gaschott, Andreas Steinmeyer, Dieter Steinhilber, and Jürgen Stein</b>                                                                                                             | <b>504</b> |
| Regulation of Transformed State by Calpastatin via PKC $\epsilon$ in NIH3T3 Mouse Fibroblasts                                                                 | <b>Takaki Hiwasa, Mitsuyuki Nakata, Miho Nakata, Shigeo Ohno, Masatoshi Maki, Koichi Suzuki, and Masaki Takiguchi</b>                                                                       | <b>510</b> |
| Messenger RNA Profiles in Liver Injury and Stress: A Comparison of Lethal and Nonlethal Rat Models                                                            | <b>Niels Tygstrup, Kristian Bangert, Peter Ott, and Hanne Cathrine Bisgaard</b>                                                                                                             | <b>518</b> |

|                                                                                                                                                                     |                                                                                                                                                          |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| FGF-2 Increases Colony Formation, PTH Receptor, and IGF-1 mRNA in Mouse Marrow Stromal Cells                                                                        | X. Zhang, T. Sobue, and M. M. Hurley                                                                                                                     | 526 |
| Differential Effect of Brefeldin A on the Palmitoylation of Surfactant Protein C Proprotein Mutants                                                                 | Anja ten Brinke, Joseph J. Batenburg, Henk P. Haagsman, Lambert M. G. van Golde, and Arie B. Vaandrager                                                  | 532 |
| Apelin (65–77) Activates Extracellular Signal-Regulated Kinases via a PTX-Sensitive G Protein                                                                       | Bernard Masri, Hicham Lahlou, Honoré Mazarguil, Bernard Knibiehler, and Yves Audigier                                                                    | 539 |
| Compact Form of DNA Induced by DNA-Binding Protein HU                                                                                                               | Takashi Endo, Naoki Sasaki, Isao Tanaka, and Mitsuo Nakata                                                                                               | 546 |
| Protein Kinase C Induces Motility of Breast Cancers by Upregulating Secretion of Urokinase-Type Plasminogen Activator through Activation of AP-1 and NF- $\kappa$ B | Daniel Sliva, Denis English, Denise Lyons, and Frank P. Lloyd, Jr.                                                                                       | 552 |
| Salt Resistance and Synergistic Effect with Vancomycin of $\alpha$ -Helical Antimicrobial Peptide P18                                                               | Song Yub Shin, Sung-Tae Yang, Eun Ju Park, Soo Hyun Eom, Woo Keun Song, Yangmee Kim, Kyung-Soo Hahm, and Jae Il Kim                                      | 558 |
| Isolation of a Novel Agglutinin with Complex Carbohydrate Binding Specificity from Fresh Fruiting Bodies of the Edible Mushroom <i>Lyophyllum shimeiji</i>          | T. B. Ng and Y. W. Lam                                                                                                                                   | 563 |
| Two Novel RNA Binding Proteins from <i>Trypanosoma brucei</i> Are Associated with 5S rRNA                                                                           | Joseph Pitula, William T. Ruyechan, and Noreen Williams                                                                                                  | 569 |
| Effect of Pectic Oligomers on Physiological Responses of Chilling Injury in Discs Excised from Zucchini ( <i>Cucurbita pepo</i> L.)                                 | René R. Balandrán-Quintana, Ana Ma. Mendoza-Wilson, Gerardo Alvarez-Manilla, Carl W. Bergmann, Irasema Vargas-Arispuro, and Miguel Angel Martínez-Téllez | 577 |
| Specificity Role of the Streptokinase C-Terminal Domain in Plasminogen Activation                                                                                   | Dong Min Kim, Sang Jun Lee, Suk Kwon Yoon, and Si Myung Byun                                                                                             | 585 |
| Biosynthesis of $\beta$ -Substituted Furan Skeleton in the Lower Furanoterpenoids: A Model Study                                                                    | Nilesh W. Gaikwad and K. M. Madyastha                                                                                                                    | 589 |
| A Physiochemical Mechanism of Hemozoin ( $\beta$ -Hematin) Synthesis by Malaria Parasite                                                                            | Abhai K. Tripathi, Satyendra K. Garg, and Babu L. Tekwani                                                                                                | 595 |
| Identification of a Novel Endothelial-Derived Gene EG-1                                                                                                             | Canhui Liu, Liping Zhang, Zhi-Ming Shao, Perrin Beatty, Maryam Sartippour, Timothy F. Lane, Sanford H. Barsky, Edward Livingston, and Mai Nguyen         | 602 |



## ERRATA

Volume **287**, Number 1 (2001), in the article "Flowering Plant Sperm Contains a Cytosolic Soluble Protein Factor Which Can Trigger Calcium Oscillations in Mouse Eggs," by Shi-Tao Li, Xiu-Ying Huang, and Fang-Zhen Sun, pages 56–59 (doi:10.1006/bbrc.2001.5538) **613**

Volume **289**, Number 5 (2001), in the article "Pleckstrin Homology Domain Interacts with Rkp1/Cpc2, a RACK1 Homolog, to Modulate Pck2-Mediated Signaling Process in *Schizosaccharomyces pombe*," by Misun Won, Young-Joo Jang, Kyung-Sook Chung, Dong-Uk Kim, Kwang-Lae Hoe, Mi-Young Han, Hyong Bai Kim, Sang-Hee Lee, Hyun-Wha Oh, and Hyang-Sook Yoo, pages 987–992 (doi:10.1006/bbrc.2001.6094) **613**

## Number 2, January 18, 2002

### BREAKTHROUGHS AND VIEWS

Calcium-Binding Proteins: Intracellular Sensors from the Calmodulin Superfamily **Françoise Haeseleer, Yoshikazu Imanishi, Izabela Sokal, Sławomir Filipek, and Krzysztof Palczewski** **615**

### REGULAR ARTICLES

Calcium-Dependent Oxidation of Thioredoxin during Cellular Growth Initiation **Carlos Gitler, Batia Zarmi, Edna Kalef, Ruth Meller, Uriel Zor, and Rachel Goldman** **624**

Demonstration of Dimethylnonanoyl-CoA Thioesterase Activity in Rat Liver Peroxisomes Followed by Purification and Molecular Cloning of the Thioesterase Involved **R. Ofman, L. el Mrabet, G. Dacremont, D. Spijjer, and R. J. A. Wanders** **629**

INF- $\gamma$  Rearranges Membrane Topography of MHC-I and ICAM-1 in Colon Carcinoma Cells **Zsolt Bacsó, László Bene, László Damjanovich, and Sándor Damjanovich** **635**

Cloning and Expression of the Rat Vacuole Membrane Protein 1 (VMP1), a New Gene Activated in Pancreas with Acute Pancreatitis, Which Promotes Vacuole Formation **Nelson J. Dusetti, Yongfeng Jiang, Maria I. Vaccaro, Richard Tomasini, Amina Azizi Samir, Ezequiel L. Calvo, Alejandro Ropolo, Fritz Fiedler, Gustavo V. Mallo, Jean-Charles Dagorn, and Juan L. Iovanna** **641**

Vitamin D<sub>3</sub> Augments Osteoclastogenesis via Vitamin D-Responsive Element of Mouse RANKL Gene Promoter **Riko Kitazawa and Sohei Kitazawa** **650**

Improvement of RNA Aptamer Activity against Myasthenic Autoantibodies by Extended Sequence Selection **Byounghoon Hwang and Seong-Wook Lee** **656**

Cyclic AMP-Specific Phosphodiesterase 4 Inhibitors Promote ABCA1 Expression and Cholesterol Efflux **Guorong Lin and Karin E. Bornfeldt** **663**

|                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                          |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Role of Ser530, Arg292, and His662 in the Allosteric Behavior of Rabbit Muscle Phosphofructokinase                                                        | Simon H. Chang and Robert G. Kemp                                                                                                                                                                                                                                                                                                                                                                                        | 670 |
| <i>Saccharomyces cerevisiae</i> Pra1p/Yip3p Interacts with Yip1p and Rab Proteins                                                                         | Monica Calero and Ruth N. Collins                                                                                                                                                                                                                                                                                                                                                                                        | 676 |
| Truncated Vitronectins: Binding to Immobilized Fibrin and to Fibrin Clots, and Their Subsequent Interaction with Cells                                    | Iris Schvartz, Dalia Seger, Galia Maik-Rachline, Tamar Kreizman, and Shmuel Shaltiel                                                                                                                                                                                                                                                                                                                                     | 682 |
| Involvement of a Ca <sup>2+</sup> -Dependent Protein Kinase Component Downstream to the Gibberellin-Binding Phosphoprotein, RuBisCO Activase, in Rice     | Arun Sharma, and Setsuko Komatsu                                                                                                                                                                                                                                                                                                                                                                                         | 690 |
| Expression of Prostaglandin E <sub>2</sub> Receptor Subtypes in Mouse Hair Follicles                                                                      | Eiko Torii, Eri Segi, Yukihiro Sugimoto, Kenzo Takahashi, Kenji Kabashima, Kohichi Ikai, and Atsushi Ichikawa                                                                                                                                                                                                                                                                                                            | 696 |
| Differentiation of Trophoblast Lineage Is Associated with DNA Methylation and Demethylation                                                               | Jun Ohgane, Naka Hattori, Mayumi Oda, Satoshi Tanaka, and Kunio Shiota                                                                                                                                                                                                                                                                                                                                                   | 701 |
| PPAR $\gamma$ Is Not a Critical Mediator of Primary Monocyte Differentiation or Foam Cell Formation                                                       | Lisa Patel, Steven J. Charlton, Ian C. Marshall, Gary B. T. Moore, Phil Coxon, Kitty Moores, John C. Clapham, Suzanna J. Newman, Stephen A. Smith, and Colin H. Macphee                                                                                                                                                                                                                                                  | 707 |
| Expression and Functional Analyses of Novel Mutations of ATP-Binding Cassette Transporter-1 in Japanese Patients with High-Density Lipoprotein Deficiency | Yoshiharu Nishida, Ken-ichi Hirano, Kosuke Tsukamoto, Makoto Nagano, Chiaki Ikegami, Kirsten Roomp, Mitsuaki Ishihara, Naoki Sakane, Zhongyan Zhang, Ken-ichi Tsujii, Akifumi Matsuyama, Tohru Ohama, Fumihiko Matsuura, Masato Ishigami, Naohiko Sakai, Hisatoyo Hiraoka, Hiroaki Hattori, Cheryl Wellington, Yoshihide Yoshida, Susumu Misugi, Michael R. Hayden, Toru Egashira, Shizuya Yamashita, and Yuji Matsuzawa | 713 |
| Association of MR1 Protein, an MHC Class I-Related Molecule, with $\beta_2$ -Microglobulin                                                                | Hisateru Yamaguchi and Keiichiro Hashimoto                                                                                                                                                                                                                                                                                                                                                                               | 722 |
| Nek2 Localizes to Multiple Sites in Mitotic Cells, Suggesting Its Involvement in Multiple Cellular Functions during the Cell Cycle                        | Yong Ha Kim, Jun Yeol Choi, Yeontae Jeong, Debra J. Wolgemuth, and Kunsoo Rhee                                                                                                                                                                                                                                                                                                                                           | 730 |
| Retina Dorsal/Ventral Patterning by <i>Xenopus</i> TBX3                                                                                                   | Kit Wong, Ying Peng, Hsiang-fu Kung, and Ming-Liang He                                                                                                                                                                                                                                                                                                                                                                   | 737 |
| The C5 Domain of Col6A3 Is Cleaved Off from the Col6 Fibrils Immediately after Secretion                                                                  | T. Aigner, L. Hambach, S. Söder, U. Schlötzer-Schrehardt, and E. Pöschl                                                                                                                                                                                                                                                                                                                                                  | 743 |
| Intact Vinculin Protein Is Required for Control of Cell Shape, Cell Mechanics, and <i>rac</i> -Dependent Lamellipodia Formation                           | Wolfgang H. Goldmann and Donald E. Ingber                                                                                                                                                                                                                                                                                                                                                                                | 749 |



|                                                                                                                                                     |                                                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----|
| A Novel Member of the Leucine-Rich Repeat Superfamily Induced in Rat Astrocytes by $\beta$ -Amyloid                                                 | Kazuki Satoh, Mitsumi Hata, and Hiroshi Yokota                                                                              | 756 |
| Chondrogenic Potential of Adipose Tissue-Derived Stromal Cells <i>in Vitro</i> and <i>in Vivo</i>                                                   | Geoffrey R. Erickson, Jeffrey M. Gimble, Dawn M. Franklin, Henry E. Rice, Hani Awad, and Farshid Guilak                     | 763 |
| Molecular Cloning and Characterization of Pentachlorophenol-Degrading Monooxygenase Genes of <i>Pseudomonas</i> sp. from the Chemostat              | Indu Shekhar Thakur, Praveen Verma, and Kailash Upadhyaya                                                                   | 770 |
| Modification of Histidine (B10) Is the Causative Agent for a Superactive Form of Insulin                                                            | Meir Wilchek and Talia Miron                                                                                                | 775 |
| Double Base Lesions of DNA by a Metabolite of Carcinogenic Benzo[a]pyrene                                                                           | Shiho Ohnishi and Shosuke Kawanishi                                                                                         | 778 |
| Molecular Cloning and Functional Characterization of Mouse Coactosin-like Protein                                                                   | Johanne Doucet, Patrick Provost, Bengt Samuelsson, and Olof Rådmark                                                         | 783 |
| Increased Activity of c-Src and Csk in Fibroblasts Transformed by v-src Oncogene                                                                    | Zdena Tuháčková, Martina Vojtěchová, Jan Hlaváček, Maria Ruzzene, Vlasta Sovová, and Lorenzo A. Pinna                       | 790 |
| Roles of DNA Fragmentation Factor and Poly(ADP-ribose) Polymerase-1 in Sensitization of Fibroblasts to Tumor Necrosis Factor-Induced Apoptosis      | A. Hamid Boulares, Anna J. Zoltoski, Zaki A. Sherif, Alexander Yakovlev, and Mark E. Smulson                                | 796 |
| Iminodiacetate and Nitrilotriacetate Degradation by <i>Kluyveromyces marxianus</i> IMB3                                                             | Nigel G. Ternan and Geoffrey McMullan                                                                                       | 802 |
| <i>Bacillus subtilis</i> Inorganic Pyrophosphatase: The C-Terminal Signature Sequence Is Essential for Enzyme Activity and Conformational Integrity | Monika A. Konopka, Scott A. White, and Tom W. Young                                                                         | 806 |
| A New Antifungal Protein and a Chitinase with Prominent Macrophage-Stimulating Activity from Seeds of <i>Phaseolus vulgaris</i> cv. pinto           | X. Y. Ye and T. B. Ng                                                                                                       | 813 |
| Poly-L-lysine/Heparin Stimulates Angiogenesis in Chick Embryo Chorioallantoic Membrane                                                              | Stefania Pacini, Massimo Gulisano, Simonetta Vannucchi, and Marco Ruggiero                                                  | 820 |
| Transport of L-Lactate, D-Lactate, and Glycolate by the LldP and GlcA Membrane Carriers of <i>Escherichia coli</i>                                  | María Felisa. Núñez, Ohsuk Kwon, T. Hastings Wilson, Juan Aguilar, Laura Baldoma, and Edmund C. C. Lin                      | 824 |
| Serological Cloning of PARIS-1: A New TBC Domain-Containing, Immunogenic Tumor Antigen from a Prostate Cancer Cell Line                             | Yaling Zhou, Monica Toth, M. Shane Hamman, Steven J. Monahan, Patricia A. Lodge, Alton L. Boynton, and Michael L. Salgaller | 830 |

|                                                                                                                                                                |                                                                                                                             |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----|
| Glycemic Control in Mice with Targeted Disruption of the Glucagon Receptor Gene                                                                                | Janice C. Parker, Kim M. Andrews, Melanie R. Allen, Jeffrey L. Stock, and John D. McNeish                                   | 839 |
| Ligand-Dependent Activation of the Melanocortin 5 Receptor: cAMP Production and Ryanodine Receptor-Dependent Elevations of $[Ca^{2+}]_i$                       | M. J. Hoogduijn, S. McGurk, N. P. M. Smit, P. H. Nibbering, J. Ancans, A. van der Laarse, and A. J. Thody                   | 844 |
| Identification of a Region Critical for Proteolysis of the Human Growth Hormone Receptor                                                                       | Françoise Conte, Jean Pierre Salles, Patrick Raynal, Laurent Fernandez, Catherine Molinas, Maïté Tauber, and Eric Bieth     | 851 |
| HSP90, HSP70, and GAPDH Directly Interact with the Cytoplasmic Domain of Macrophage Scavenger Receptors                                                        | Toshinobu Nakamura, Jun-ichi Hinagata, Toshiki Tanaka, Takeshi Imanishi, Youichiro Wada, Tatsuhiko Kodama, and Takefumi Doi | 858 |
| Isolation and Characterization of Mouse Homolog of the Neutrophil Activating Peptide-2                                                                         | Masaaki Oda, Hirotaka Haruta, Masaya Nagao, and Yuka Nagata                                                                 | 865 |
| Identification of a Bisphosphonate That Inhibits Isopentenyl Diphosphate Isomerase and Farnesyl Diphosphate Synthase                                           | Keith Thompson, James E. Dunford, Frank H. Ebetino, and Michael J. Rogers                                                   | 869 |
| Inverse Relationship of Skeletal Muscle Glycogen from Wild-Type and Genetically Modified Mice to Their Phosphorylase $\alpha$ Activity                         | Louis H. Schliselfeld and Moris J. Danon                                                                                    | 874 |
| A Critical Role for the Carboxy Terminal Region of the Proprotein Convertase, PACE4A, in the Regulation of Its Autocatalytic Activation Coupled with Secretion | Takazumi Taniguchi, Rieko Kuroda, Kensuke Sakurai, Masami Nagahama, Ikuo Wada, Akihiko Tsuji, and Yoshiko Matsuda           | 878 |

Number 3, January 25, 2002

## BREAKTHROUGHS AND VIEWS

|                                                     |                                                             |     |
|-----------------------------------------------------|-------------------------------------------------------------|-----|
| New Tools for Quantitative Phosphoproteome Analysis | Thomas P. Conrads, Haleem J. Issaq, and Timothy D. Veenstra | 885 |
|-----------------------------------------------------|-------------------------------------------------------------|-----|

## REGULAR ARTICLES

|                                                                                                                                                                   |                                                                                               |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----|
| Down-Regulation of Macrophage CD9 Expression by Interferon- $\gamma$                                                                                              | Xue-Qing Wang, Glenn F. Evans, M. Leticia Alfaro, and Steven H. Zuckerman                     | 891 |
| Stabilization of RNA Strands in Protein Synthesis by Type I Procollagen C-Proteinase Enhancer Protein, a Potential RNA-Binding Protein, in Hepatic Stellate Cells | Atsushi Matsui, Mikio Yanase, Tomoaki Tomiya, Hitoshi Ikeda, Kenji Fujiwara, and Itsuro Ogata | 898 |



|                                                                                                                                                                                    |                                                                                                                                                                                                     |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Selective Up-Regulation of System A<br>Transporter mRNA in Diabetic Liver                                                                                                          | <b>Hélène Varoqui and Jeffrey D. Erickson</b>                                                                                                                                                       | <b>903</b> |
| Hydrogen Peroxide Is an Endothelium-<br>Derived Hyperpolarizing Factor in Human<br>Mesenteric Arteries                                                                             | <b>Tetsuya Matoba, Hiroaki Shimokawa,<br/>Hiroshi Kubota, Keiko Morikawa,<br/>Takako Fujiki, Ikuko Kunihiro,<br/>Yasushi Mukai, Yoji Hirakawa,<br/>and Akira Takeshita</b>                          | <b>909</b> |
| Activation Mechanism of Solubilized<br>Epidermal Growth Factor Receptor Tyrosine<br>Kinase                                                                                         | <b>Gaoxiang Ge, Jing Wu, Yan Wang,<br/>and Qishui Lin</b>                                                                                                                                           | <b>914</b> |
| Paraoxonase 1 Overexpression in Mice and Its<br>Effect on High-Density Lipoproteins                                                                                                | <b>Michael N. Oda, John K. Bielicki,<br/>Tamara T. Ho, Trish Berger,<br/>Edward M. Rubin, and Trudy M. Forte</b>                                                                                    | <b>921</b> |
| A Novel Approach for Uniform $^{13}\text{C}$ and $^{15}\text{N}$<br>Labeling of DNA for NMR Studies                                                                                | <b>Sunita Ramanathan, Basuthkar J. Rao,<br/>and K. V. R. Chary</b>                                                                                                                                  | <b>928</b> |
| Interactivating Feedback Loops within the<br>Mammalian Clock: BMAL1 Is Negatively<br>Autoregulated and Upregulated by CRY1,<br>CRY2, and PER2                                      | <b>Wangjie Yu, Masahiko Nomura,<br/>and Masaaki Ikeda</b>                                                                                                                                           | <b>933</b> |
| The Homeodomain-Interacting Protein Kinase<br>2 Gene Is Expressed Late in Embryogenesis<br>and Preferentially in Retina, Muscle, and<br>Neural Tissues                             | <b>Giovanna Maria Pierantoni,<br/>Alessandro Bulfone, Francesca Pentimalli,<br/>Monica Fedele, Rodolfo Iuliano,<br/>Massimo Santoro, Lorenzo Chiariotti,<br/>Andrea Ballabio, and Alfredo Fusco</b> | <b>942</b> |
| Identification of Protein Substrates of $\text{Ca}^{2+}$ /<br>Calmodulin-Dependent Protein Kinase II in<br>the Postsynaptic Density by Protein<br>Sequencing and Mass Spectrometry | <b>Yoshiyuki Yoshimura, Takashi Shinkawa,<br/>Masato Taoka, Kana Kobayashi,<br/>Toshiaki Isobe, and Takashi Yamauchi</b>                                                                            | <b>948</b> |
| <i>Msx2</i> Expression in the Apical Ectoderm Ridge<br>Is Regulated by an <i>Msx2</i> and <i>Dll5</i> Binding<br>Site                                                              | <b>Zhong-Zong Pan, Mark S. Kronenberg,<br/>Dah-Yeou Huang, Lauro Sumoy,<br/>Blanka Rogina, Alexander C. Lichtler,<br/>and William B. Upholt</b>                                                     | <b>955</b> |
| Covalent DNA Immobilization on<br>Polymer-Shielded Silver-Coated Quartz<br>Crystal Microbalance Using Photobiotin-Based<br>UV Irradiation                                          | <b>Xiaodi Su</b>                                                                                                                                                                                    | <b>962</b> |
| Glycogen Synthase Kinase-3 Inhibition by<br>Lithium and Beryllium Suggests the Presence<br>of Two Magnesium Binding Sites                                                          | <b>W. Jonathan Ryves, Rana Dajani,<br/>Laurence Pearl, and Adrian J. Harwood</b>                                                                                                                    | <b>967</b> |
| Advanced Glycation End Products-Induced<br>Apoptosis and Overexpression of Vascular<br>Endothelial Growth Factor in Bovine Retinal<br>Pericytes                                    | <b>Sho-ichi Yamagishi, Shinjiro Amano,<br/>Yosuke Inagaki, Tamami Okamoto,<br/>Kohachiro Koga, Nobuyuki Sasaki,<br/>Hiroshi Yamamoto, Masayoshi Takeuchi,<br/>and Zenji Makita</b>                  | <b>973</b> |
| Deimination of Arginine Residues in<br>Nucleophosmin/B23 and Histones in HL-60<br>Granulocytes                                                                                     | <b>Teruki Hagiwara, Katsuhiko Nakashima,<br/>Hisashi Hirano, Tatsuo Senshu,<br/>and Michiyuki Yamada</b>                                                                                            | <b>979</b> |

|                                                                                                                                                                                          |                                                                                                                                                                |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Dioxin Stimulates Synthesis and Secretion of IgE-Dependent Histamine-Releasing Factor                                                                                                    | Kosuke Oikawa, Tetsuya Ohbayashi, Junsei Mimura, Yoshiaki Fujii-Kuriyama, Shigetada Teshima, Kazuhito Rokutan, Kiyoshi Mukai, and Masahiko Kuroda              | 984  |
| Dissociation of Apoptosis Induction and CD36 Upregulation by Enzymatically Modified Low-Density Lipoprotein in Monocytic Cells                                                           | Kristina Jostarndt, Nina Gellert, Tina Rubic, Christian Weber, Hartmut Kühn, Berit Johansen, Nina Hrboticky, and Jiri Neuzil                                   | 988  |
| Active Site of Deblocking Aminopeptidase from <i>Pyrococcus horikoshii</i>                                                                                                               | Shinji Onoe, Susumu Ando, Mitsuo Ataka, and Kazuhiko Ishikawa                                                                                                  | 994  |
| DNA-Binding Specificity of the ERF/AP2 Domain of <i>Arabidopsis</i> DREBs, Transcription Factors Involved in Dehydration- and Cold-Inducible Gene Expression                             | Yoh Sakuma, Qiang Liu, Joseph G. Dubouzet, Hiroshi Abe, Kazuo Shinozaki, and Kazuko Yamaguchi-Shinozaki                                                        | 998  |
| Mitochondrial Nitric Oxide Localization in H9c2 Cells Revealed by Confocal Microscopy                                                                                                    | B. Zanella, N. Calonghi, E. Pagnotta, L. Masotti, and C. Guarnieri                                                                                             | 1010 |
| Ca <sup>2+</sup> Response to cADPr during Maturation and Fertilization of Starfish Oocytes                                                                                               | Gilda A. Nusco, Dmitri Lim, Pawel Sabala, and Luigia Santella                                                                                                  | 1015 |
| Identification and Immunocytochemical Analysis of DCNP1, a Dendritic Cell-Associated Nuclear Protein                                                                                     | Masako Masuda, Satoru Senju, Shin-ichiro Fujii, Yasuhiro Terasaki, Motohiro Takeya, Shin-ichi Hashimoto, Kouji Matsushima, Eiji Yumoto, and Yasuharu Nishimura | 1022 |
| 5T4 Interacts with TIP-2/GIPC, a PDZ Protein, with Implications for Metastasis                                                                                                           | Abida Awan, Melinda R. Lucic, David M. Shaw, Freda Sheppard, Caroline Westwater, Steve A. Lyons, and Peter L. Stern                                            | 1030 |
| Generation of Polyclonal Antibody against $\mu$ -Conotoxin GIIIA Using an Immunogen of [Cys <sup>5</sup> ] $\mu$ -Conotoxin GIIIA Site-Specifically Conjugated with Bovine Serum Albumin | Mitsuhiro Nakamura, Yuichi Oba, Tatsuya Mori, Kazuki Sato, Yukisato Ishida, Tsukasa Matsuda, and Hideshi Nakamura                                              | 1037 |
| Adenovirus-Mediated Murine Interferon- $\gamma$ Receptor Transfer Enhances the Efficacy of INF- $\gamma$ <i>in Vivo</i>                                                                  | Yasuto Nishida, Yasushi Maeda, Akio Hara, Toshiyuki Arima, En Kimura, Satoshi Yamashita, Eiichiro Uyama, Shuji Mita, and Makoto Uchino                         | 1042 |
| AP-2 and Ikaros Regulate Transcription of Human Placental Leucine Aminopeptidase/Oxytocinase Gene                                                                                        | Tomomi Ito, Seiji Nomura, Mayumi Okada, Yoshinari Katsumata, Fumitaka Kikkawa, Tomohiro Rogi, Masafumi Tsujimoto, and Shigehiko Mizutani                       | 1048 |
| Analysis of the Human TrkB Gene Genomic Organization Reveals Novel TrkB Isoforms, Unusual Gene Length, and Splicing Mechanism                                                            | Peter Stoilov, Eero Castren, and Stefan Stamm                                                                                                                  | 1054 |



|                                                                                                                                          |                                                                                                                                                     |      |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Proteasomal Degradation of Retinoblastoma-Related p130 during Adipocyte Differentiation                                                  | Audra M. Prince, Julie S. May,<br>Gregory R. Burton, Robert E. Lyle,<br>and Robert E. McGehee Jr.                                                   | 1066 |
| Imprinting of the Murine <i>Mas</i> Protooncogene Is Restricted to Its Antisense RNA                                                     | Natalia Alenina, Michael Bader,<br>and Thomas Walther                                                                                               | 1072 |
| Efficient Isolation of Regulatory Sequences from Human Genome and BAC DNA                                                                | Hai-Ming Xu, Shen Zhang, De-Pei Liu,<br>Xing-Guo Li, De-Long Hao,<br>and Chih-Chuan Liang                                                           | 1079 |
| Hormonal Regulation of Adiponectin Gene Expression in 3T3-L1 Adipocytes                                                                  | Mathias Fasshauer, Johannes Klein,<br>Susanne Neumann, Markus Eszlinger,<br>and Ralf Paschke                                                        | 1084 |
| Induction of Nitric Oxide Synthase Expression by <i>Vibrio vulnificus</i> Cytolysin                                                      | Mi-Kyung Kang, Eun-Chung Jhee,<br>Bon-Sun Koo, Jeong-Yeh Yang,<br>Byung-Hyun Park, Jong-Suk Kim,<br>Hye-Won Rho, Hyung-Rho Kim,<br>and Jin-Woo Park | 1090 |
| Mouse Hepatocyte Growth Factor (HGF) Activator Inhibitor Type 2 Lacking the First Kunitz Domain Potently Inhibits the HGF Activator      | Hiroaki Kataoka, Hiroshi Itoh,<br>Yoshitsugu Nuki, Ryouichi Hamasuna,<br>Seiji Naganuma, Naomi Kitamura,<br>and Takeshi Shimomura                   | 1096 |
| p53 Inhibits Adriamycin-Induced Down-Regulation of Cyclin D1 Expression in Human Cancer Cells                                            | Jianghua Shao, Fuminori Teraishi,<br>Koh Katsuda, Noriaki Tanaka,<br>and Toshiyoshi Fujiwara                                                        | 1101 |
| T2BP, a Novel TRAF2 Binding Protein, Can Activate NF- $\kappa$ B and AP-1 without TNF Stimulation                                        | Mutsumi Kanamori, Harukazu Suzuki,<br>Rintaro Saito, Masami Muramatsu,<br>and Yoshihide Hayashizaki                                                 | 1108 |
| Microarray Analysis of Gene Expression Changes in Mouse Liver Induced by Peroxisome Proliferator-Activated Receptor $\alpha$ Agonists    | Kazuto Yamazaki, Junro Kuromitsu,<br>and Isao Tanaka                                                                                                | 1114 |
| A Role for Focal Adhesion Kinase in Hyluronan-Dependent MMP-2 Secretion in a Human Small-Cell Lung Carcinoma Cell Line, QG90             | Yanying Zhang, Aye Aye Thant,<br>Yukiko Hiraiwa, Yuko Naito,<br>Thet Thet Sein, Yasuyoshi Sohara,<br>Satoru Matsuda, and Michinari Hamaguchi        | 1123 |
| Association of Heat-Induced Conformational Change with Activity Loss of Rubisco                                                          | Guofu Li, Haibin Mao, Xiang Ruan,<br>Qiang Xu, Yandao Gong, Xiufang Zhang,<br>and Nanming Zhao                                                      | 1128 |
| Interferon $\beta$ Secreted from Human Hair Dermal Papilla Cells Inhibits the Growth of Outer Root Sheath Cells Cultured <i>in Vitro</i> | Chang Deok Kim, Youngshik Choe,<br>Chanseob Shim, and Kyungjin Kim                                                                                  | 1133 |
| <i>cis</i> -Elements Involved in Expression of Unspliced RNA in Moloney Murine Leukemia Virus                                            | Sakuo Hoshi, Takashi Odawara,<br>Masamichi Oshima,<br>Yoshihiro Kitamura, Hajime Takizawa,<br>and Hiroshi Yoshikura                                 | 1139 |

Number 4, February 1, 2002

**BREAKTHROUGHS AND VIEWS**

- |                                                                                                                                |                                                       |             |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------|
| A Permissive Apoptotic Environment:<br>Function of a Decrease in Intracellular<br>Superoxide Anion and Cytosolic Acidification | <b>Shazib Pervaiz<br/>and Marie-Véronique Clément</b> | <b>1145</b> |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------|

**REGULAR ARTICLES**

- |                                                                                                                                                                 |                                                                                                                                                       |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| rDNA Transcription during <i>Xenopus laevis</i><br>Oogenesis                                                                                                    | <b>Benoit Roger, André Moisand,<br/>François Amalric, and Philippe Bouvet</b>                                                                         | <b>1151</b> |
| Production of Recombinant Large<br>Proneurotensin/Neuromedin N-Derived<br>Peptides and Characterization of Their<br>Binding and Biological Activity             | <b>Claire Friry, Sylvain Feliciangeli,<br/>Françoise Richard, Patrick Kitabgi,<br/>and Carole Rovere</b>                                              | <b>1161</b> |
| Depolarization of the Membrane Potential by<br>$\beta$ -Lactams as a Signal to Induce Autolysis                                                                 | <b>András Penyige, János Matkó,<br/>Eleonóra Deák, Andrea Bodnár,<br/>and György Barabás</b>                                                          | <b>1169</b> |
| Hyperpolarization, but Not Depolarization,<br>Increases Intracellular $\text{Ca}^{21}$ Level in Cultured<br>Chick Myoblasts                                     | <b>Jae-Yong Park, Doyun Lee, Ji-Ung Maeng,<br/>Duk-Su Koh, and Kyungjin Kim</b>                                                                       | <b>1176</b> |
| Alteration of Stringent Response of the<br><i>Escherichia coli rnpB</i> Promoter by Mutations<br>in the -35 Region                                              | <b>Jeong Won Park, Yongwon Jung,<br/>Sang Jo Lee, Ding J. Jin,<br/>and Younghoon Lee</b>                                                              | <b>1183</b> |
| Kinetic Analysis of C-Terminally Truncated<br>RNA-Dependent RNA Polymerase of Hepatitis<br>C Virus                                                              | <b>Takahito Kashiwagi, Koyu Hara,<br/>Michinori Kohara, Kyoko Kohara,<br/>Jun Iwahashi, Nobuyuki Hamada,<br/>Haruhito Yoshino, and Tetsuya Toyoda</b> | <b>1188</b> |
| Isolation of Single-Stranded DNA from<br>Loop-Mediated Isothermal Amplification<br>Products                                                                     | <b>Kentaro Nagamine, Yoko Kuzuhara,<br/>and Tsugunori Notomi</b>                                                                                      | <b>1195</b> |
| Mitochondrial ATPase Subunit 6 and<br>Cytochrome <i>b</i> Gene Polymorphisms in Young<br>Obese Adults                                                           | <b>Noriyuki Fuku, Yoshiharu Oshida,<br/>Takeshi Takeyasu, Li-Jun Guo,<br/>Miyuki Kurata, Yoshiji Yamada,<br/>Yuzo Sato, and Masashi Tanaka</b>        | <b>1199</b> |
| Expression in <i>Escherichia coli</i> , Purification<br>and Kinetic Characterization of Human<br>Heparan Sulfate 3-O-Sulfotransferase-1                         | <b>James R. Myette, Zachary Shriver, Jian Liu,<br/>Ganesh Venkataraman, Robert Rosenberg,<br/>and Ram Sasisekharan</b>                                | <b>1206</b> |
| Identification of Structural Motifs and Amino<br>Acids within the Structure of Human Heparan<br>Sulfate 3-O-Sulfotransferase That Mediate<br>Enzymatic Function | <b>Rahul Raman, James Myette,<br/>Ganesh Venkataraman, V. Sasisekharan,<br/>and Ram Sasisekharan</b>                                                  | <b>1214</b> |



|                                                                                                                                                                     |                                                                                                                                                                                  |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| PDGF Receptor- $\alpha$ Deficiency in Glomerular Mesangial Cells of Tenascin-C Knockout Mice                                                                        | <b>Kenji Matsumoto, Noriko Hiraiwa, Atsushi Yoshiki, Masatake Ohnishi, and Moriaki Kusakabe</b>                                                                                  | <b>1220</b> |
| The bHLH/PAS Factor MOP3 Does Not Participate in Hypoxia Responses                                                                                                  | <b>Karen D. Cowden and M. Celeste Simon</b>                                                                                                                                      | <b>1228</b> |
| Orexins Activate Histaminergic Neurons via the Orexin 2 Receptor                                                                                                    | <b>Akihiro Yamanaka, Natsuko Tsujino, Hisayuki Funahashi, Kazuki Honda, Jian-lian Guan, Quing-Ping Wang, Makoto Tominaga, Katsutoshi Goto, Seiji Shioda, and Takeshi Sakurai</b> | <b>1237</b> |
| Tyrosine Kinases Act Directly on the $\alpha_1$ Subunit to Modulate $\text{Ca}_v2.2$ Calcium Channels                                                               | <b>S. Wijetunge, A. C. Dolphin, and A. D. Hughes</b>                                                                                                                             | <b>1246</b> |
| Isoforms of <i>mi</i> Transcription Factor Preferentially Expressed in Cultured Mast Cells of Mice                                                                  | <b>Keisuke Oboki, Eiichi Morii, Tatsuki R. Kataoka, Tomoko Jippo, and Yukihiro Kitamura</b>                                                                                      | <b>1250</b> |
| Mechanism of Oxidative Stress-Induced <i>GADD153</i> Gene Expression in Vascular Smooth Muscle Cells                                                                | <b>Jia-Rong Tang, Michitsugu Nakamura, Takafumi Okura, Yasunori Takata, Sanae Watanabe, Zhao-Hui Yang, Jun Liu, Yutaka Kitami, and Kunio Hiwada</b>                              | <b>1255</b> |
| Mammalian fat3: A Large Protein That Contains Multiple Cadherin and EGF-like Motifs                                                                                 | <b>Kazutaka Mitsui, Daisuke Nakajima, Osamu Ohara, and Manabu Nakayama</b>                                                                                                       | <b>1260</b> |
| Two Phosphorylation-Independent Sites on the p85 SH2 Domains Bind A-Raf Kinase                                                                                      | <b>Yun Fang, Lindsey M. Johnson, Elizabeth S. Mahon, and Deborah H. Anderson</b>                                                                                                 | <b>1267</b> |
| Down-Regulation of Mcl-1 by Inhibition of the PI3-K/Akt Pathway Is Required for Cell Shrinkage-Dependent Cell Death                                                 | <b>Takashi Araki, Matsuhiko Hayashi, Naohide Watanabe, Hirotaka Kanuka, Jun Yoshino, Masayuki Miura, and Takao Saruta</b>                                                        | <b>1275</b> |
| Cloning, Expression, and Mapping of a Gene That Is Upregulated in Adipose Tissue of Mice Deficient in Bombesin Receptor Subtype-3                                   | <b>Kumiko Aoki, Ying-Jie Sun, Shunsuke Aoki, Keiji Wada, and Etsuko Wada</b>                                                                                                     | <b>1282</b> |
| Extracellular Signal-Regulated Protein Kinases Mediate $\text{H}^+$ , $\text{K}^+$ -ATPase $\alpha$ -Subunit Gene Expression                                        | <b>Satoshi Kusayanagi, Yoshiaki Takeuchi, Andrea Todisco, and Keiji Mitamura</b>                                                                                                 | <b>1289</b> |
| NF- $\kappa$ B Involvement in the Polyunsaturated Fat Inhibition of Fatty Acid Synthase Gene Transcription                                                          | <b>Margarita Teran-Garcia, Caterina Rufo, Manabu T. Nakamura, Timothy F. Osborne, and Steven D. Clarke</b>                                                                       | <b>1295</b> |
| Identification of G-Proteins Coupling to the Vasoactive Intestinal Peptide Receptor VPAC <sub>1</sub> Using Immunoaffinity Chromatography: Evidence for Precoupling | <b>S. Martin Shreeve</b>                                                                                                                                                         | <b>1300</b> |
| The Susceptibility to Fas-Induced Apoptosis in Normal Enterocytes Is Regulated on the Level of cIAP1 and 2                                                          | <b>F. M. Ruemmele, J. F. Beaulieu, J. O'Connell, M. W. Bennett, E. G. Seidman, and M. J. Lentze</b>                                                                              | <b>1308</b> |

|                                                                                                                          |                                                                                                                                                 |      |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Mitosis-Dependent Phosphorylation and Activation of LIM-Kinase 1                                                         | Tomoyuki Sumi, Kunio Matsumoto, and Toshikazu Nakamura                                                                                          | 1315 |
| TGF $\beta$ 2 Mediates Rapid Inhibition of Calcium Influx in Identified Cholinergic Basal Forebrain Neurons              | Sylvain Williams, Serhiy Souchelnyskyi, and Marc Danik                                                                                          | 1321 |
| A Rapid Method to Capture and Screen for Transcription Factors by SELDI Mass Spectrometry                                | Cameron E. Forde, Arlene D. Gonzales, Jean M. Smessaert, Gloria A. Murphy, Sharon J. Shields, J. Patrick Fitch, and Sandra L. McCutchen-Maloney | 1328 |
| Superantigen-Induced Apoptotic Death of Tumor Cells Is Mediated by Cytotoxic Lymphocytes, Cytokines, and Nitric Oxide    | Tapan K. Mondal, D. Bhatta, Surojit Biswas, and Prakriti Pal                                                                                    | 1336 |
| Cloned and Expressed Fungal <i>phyA</i> Gene in Alfalfa Produces a Stable Phytase                                        | Abul H. J. Ullah, Kandan Sethumadhavan, Edward J. Mullaney, Thomas Ziegelhoffer, and Sandra Austin-Phillips                                     | 1343 |
| The Obesity in Bilateral Ovariectomized Rats Is Related to a Decrease in the Expression of Leptin Receptors in the Brain | Mitsuhiro Kimura, Minoru Irahara, Toshiyuki Yasui, Seiichiro Saito, Michiko Tezuka, Shuji Yamano, Masaharu Kamada, and Toshihiro Aono           | 1349 |
| Role of c-Fyn in FGF-2-Mediated Tube-like Structure Formation by Murine Brain Capillary Endothelial Cells                | Satoshi Tsuda, Akira Ohtsuru, Shunichi Yamashita, Hiroshi Kanetake, and Shigeru Kanda                                                           | 1354 |

Number 5, February 8, 2002

|                                                                                                                                          |                                                                                                                  |      |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------|
| Modulation of THP-1 Macrophage and Cholesterol-Loaded Foam Cell Apolipoprotein E Levels by Glycosphingolipids                            | Brett Garner, Howard R. Mellor, Terry D. Butters, Raymond A. Dwek, and Frances M. Platt                          | 1361 |
| Calmodulin and Cyclin D Anchoring Sites on the <i>Src</i> -Suppressed C Kinase Substrate, SSeCKS                                         | Xueying Lin and Irwin H. Gelman                                                                                  | 1368 |
| Macrophage Cholesterol Efflux to Free Apoprotein A-I in C3H and C57BL/6 Mice                                                             | Olga Stein, Mazal Ben-Naim, Yedida Dabach, Gideon Hollander, and Yechezkiel Stein                                | 1376 |
| Hemoglobin Equilibrium Analysis by the Multiangle Laser Light-Scattering Method                                                          | Takamasa Yamaguchi and Kazuhiko Adachi                                                                           | 1382 |
| Copper Inhibits Activated Protein C: Protective Effect of Human Albumin and an Analogue of Its High-Affinity Copper-Binding Site, d-DAHK | David Bar-Or, Leonard T. Rael, James V. Winkler, Richard L. Yukl, Gregory W. Thomas, and Richard P. Shimonkevitz | 1388 |
| Structural Changes of the Erythrocyte as a Marker of Non-Insulin-Dependent Diabetes: Protective Effects of <i>N</i> -Acetylcysteine      | Elisabetta Straface, Roberto Rivabene, Roberta Masella, Maria Santulli, Roberto Paganelli, and Walter Malorni    | 1393 |



|                                                                                                                                                                                                      |                                                                                                                                                                                                  |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Isolation and Characterization of a Novel F-Box Protein Pof10 in Fission Yeast                                                                                                                       | Chiho Ikebe, Kin-ichiro Kominami, Takashi Toda, and Kei-Ichi Nakayama                                                                                                                            | 1399 |
| $\gamma$ -Secretase-like Cleavages of Notch and $\beta$ APP Are Mutually Exclusive in Human Cells                                                                                                    | Agnès Petit, Peter St George-Hyslop, Paul Fraser, and Frédéric Checler                                                                                                                           | 1408 |
| Full-Length cDNA Cloning of Human Neuroglobin and Tissue Expression of Rat Neuroglobin                                                                                                               | Chenggang Zhang, Chunli Wang, Meiyu Deng, Lin Li, Hangyan Wang, Ming Fan, Wenlin Xu, Fanwei Meng, Lingjia Qian, and Fuchu He                                                                     | 1411 |
| Characterization of the Cellular and Metabolic Effects of a Novel Enzyme-Resistant Antagonist of Glucose-Dependent Insulinotropic Polypeptide                                                        | Victor A. Gault, Finbarr P. M. O'Harte, Patrick Harriott, and Peter R. Flatt                                                                                                                     | 1420 |
| Induction of Multidrug Resistance Proteins <i>MRP1</i> and <i>MRP3</i> and $\gamma$ -Glutamylcysteine Synthetase Gene Expression by Nonsteroidal Anti-inflammatory Drugs in Human Colon Cancer Cells | Shigeru Tatebe, Frank A. Sinicrope, and M. Tien Kuo                                                                                                                                              | 1427 |
| ATP Binding and Hydrolysis and Autophosphorylation of CbbQ Encoded by the Gene Located Downstream of RubisCO Genes                                                                                   | Nobuhiro R. Hayashi and Yasuo Igarashi                                                                                                                                                           | 1434 |
| Stabilization of Molten Globule State of Papain by Urea                                                                                                                                              | F. Edwin, Yagya Valkya Sharma, and M. V. Jagannadham                                                                                                                                             | 1441 |
| Src Family Kinase-Dependent Phosphorylation of a 29-kDa Caveolin-Associated Protein                                                                                                                  | Lisa F. Newcomb and Cynthia Corley Mastick                                                                                                                                                       | 1447 |
| Blocking HSF1 by Dominant-Negative Mutant to Sensitize Tumor Cells to Hyperthermia                                                                                                                   | Jin-Hui Wang, Ming-Zhong Yao, Jin-Fa Gu, Lan-Ying Sun, Yu-Fei Shen, and Xin-Yuan Liu                                                                                                             | 1454 |
| Arginine Residues in Domain V Have a Central Role for Bacteria-Binding Activity of Macrophage Scavenger Receptor MARCO                                                                               | Annika Brännström, Marko Sankala, Karl Tryggvason, and Timo Pikkarainen                                                                                                                          | 1462 |
| Human Endothelial Pyk2 Is Expressed in Two Isoforms and Associates with Paxillin and p130Cas                                                                                                         | Rosemary J. Keogh, Rebecca A. Houliston, and Caroline P. D. Wheeler-Jones                                                                                                                        | 1470 |
| Mast Cell Chymase Regulates Dermal Mast Cell Number in Mice                                                                                                                                          | Yoshiaki Tomimori, Tsuyoshi Muto, Harukazu Fukami, Kayo Saito, Chika Horikawa, Nobuo Tsuruoka, Kyoko Yamashiro, Masayuki Saito, Namino Sugiura, Motoo Sumida, Saki Kakutani, and Yoshiaki Fukuda | 1478 |
| Induction of uPA but Not NF-IL3A by Calcitonin Is Dependent on Erk1/2 Phosphorylation in Porcine Renal Cell Line LLC-PK1                                                                             | Misa Nakamura, Qifeng Yang, Takashi Ozaki, Yasushi Nakamura, Hisashi Yamasaki, Ichiro Mori, and Kennichi Kakudo                                                                                  | 1483 |
| Proteolipidic Vectors for Gene Transfer to the Lung                                                                                                                                                  | Laurence Vaysse, Christine Guillaume, Ingrid Burgelin, Philippe Gorry, Claude Férec, and Benoît Arveiler                                                                                         | 1489 |

|                                                                                                                                          |                                                                                                                                                                                                                             |      |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <i>Asb4</i> , <i>Ata3</i> , and <i>Dcn</i> Are Novel Imprinted Genes Identified by High-Throughput Screening Using RIKEN cDNA Microarray | Yosuke Mizuno, Yusuke Sotomaru, Yukiko Katsuzawa, Tomohiro Kono, Makiko Meguro, Mitsuo Oshimura, Jun Kawai, Yasuhiro Tomaru, Hidenori Kiyosawa, Itoshi Nikaido, Hiroshi Amanuma, Yoshihide Hayashizaki, and Yasushi Okazaki | 1499 |
| EGCG Attenuates AMPA-Induced Intracellular Calcium Increase in Hippocampal Neurons                                                       | Jae Hoon Bae, Kyo Cheol Mun, Won Kyun Park, Seung-Ryong Lee, Seong-Il Suh, Won Ki Baek, Man-Bin Yim, Taeg Kyu Kwon, and Dae-Kyu Song                                                                                        | 1506 |
| Phosphoenolpyruvate Carboxykinase Is Induced in Growth-Arrested Hepatoma Cells                                                           | Nawal Zeitouni, Darrell W. Eubank, Alex Q. Lee, Misti G. Oxford, Thomas L. Freeman, Mark E. Mailliard, and Elmus G. Beale                                                                                                   | 1513 |
| The Basic Helix–Loop–Helix Domain of the E47 Transcription Factor Requires Other Protein Regions for Full DNA Binding Activity           | Jun Lu and Steven R. Sloan                                                                                                                                                                                                  | 1521 |
| Angiotensin II Reduces Macrophage Cholesterol Efflux: A Role for the AT-1 Receptor but Not for the ABC1 Transporter                      | Marielle Kaplan, Michael Aviram, Carlos Knopf, and Shlomo Keidar                                                                                                                                                            | 1529 |
| Hyperlipidemia Induced by High Cholesterol Diet Inhibits Heat Shock Response in Rat Hearts                                               | Tamás Csont, Gábor Balogh, Csaba Csonka, Imre Boros, Ibolya Horváth, László Vigh, and Péter Ferdinandy                                                                                                                      | 1535 |
| Heme Oxygenase-1 Induction May Explain the Antioxidant Profile of Pentaerythrityl Trinitrate                                             | Stefanie Oberle, Aida Abate, Nina Grosser, Hendrik J. Vreman, Phyllis A. Dennery, Heinz T. Schneider, Dirk Stalleicken, and Henning Schröder                                                                                | 1539 |
| Cocaine Increases Dopamine Uptake and Cell Surface Expression of Dopamine Transporters                                                   | Lynette C. Daws, Paul D. Callaghan, José A. Morón, Kris M. Kahlig, Toni S. Shippenberg, Jonathan A. Javitch, and Aurelio Galli                                                                                              | 1545 |
| Thrombospondin-1 Differentially Regulates Release of IL-6 and IL-10 by Human Monocytic Cell Line U937                                    | Yasushi Yamauchi, Motomu Kuroki, Takayuki Imakiire, Hironori Abe, Hiroko Uchida, Richiko Beppu, Yuichi Yamashita, Masahide Kuroki, and Takayuki Shirakusa                                                                   | 1551 |
| 1 $\alpha$ ,25-Dihydroxyvitamin D <sub>3</sub> Increases TGF $\beta$ 1 Binding to Human Osteoblasts                                      | David Nagel and Rajiv Kumar                                                                                                                                                                                                 | 1558 |
| K <sup>+</sup> Channel cAMP Activated in Guinea Pig Gallbladder Epithelial Cells                                                         | Giuliano Meyer, Claudia Bazzini, Guido Bottà, Maria Lisa Garavaglia, Rodighiero Simona, Rosangela Manfredi, Chiara Sironi, Silvia De Biasi, and Markus Paulmichl                                                            | 1564 |
| Analysis of Early Apoptotic Events in Individual Cells by Fluorescence Intensity and Polarization Measurements                           | N. Zurgil, Y. Shafran, D. Fixler, and M. Deutsch                                                                                                                                                                            | 1573 |



|                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                        |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Selection of RNA Aptamers to the Alzheimer's Disease Amyloid Peptide                                                                                                                                                                                                                     | <b>Francisco Ylera, Rudi Lurz,<br/>Volker A. Erdmann, and Jens Peter Fürste</b>                                                                                                                        | <b>1583</b> |
| Enhanced Activity of the Plasma Membrane Oxidoreductase in Circulating Lymphocytes from Insulin-Dependent Diabetes Mellitus Patients                                                                                                                                                     | <b>Giorgio Lenaz, Ugo Paolucci,<br/>Romana Fato, Marilena D'Aurelio,<br/>Giovanna Parenti Castelli, Gianluca Sgarbi,<br/>Graziella Biagini, Luca Ragni,<br/>Silvana Salardi, and Emanuele Cacciari</b> | <b>1589</b> |
| Sequence Analysis of the Entire Mitochondrial Genome in Parkinson's Disease                                                                                                                                                                                                              | <b>Cristofol Vives-Bauza, Antoni L. Andreu,<br/>Giovanni Manfredi, M. Flint Beal,<br/>Bernd Janetzky, Thomas H. Gruenewald,<br/>and Michael T. Lin</b>                                                 | <b>1593</b> |
| Structural Investigation of the Hedamycin:d(ACCGGT) <sub>2</sub> Complex by NMR and Restrained Molecular Dynamics                                                                                                                                                                        | <b>Elisabeth A. Owen, Glenn A. Burley,<br/>John A. Carver, Geoffrey Wickham,<br/>and Max A. Keniry</b>                                                                                                 | <b>1602</b> |
| <b>ERRATUM</b>                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                        |             |
| Volume <b>289</b> , Number 2 (2001), in the article "The SH-3 and SH-4 Antibodies Recognize Distinct Epitopes on CD73 from Human Mesenchymal Stem Cells," by Frank Barry, Raymond Boynton, Mary Murphy, Stephen Haynesworth, and Joseph Zaia, pages 519–524 (doi:10.1006/bbrc.2001.6013) |                                                                                                                                                                                                        | <b>1609</b> |
| Author Index for Volume 290                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        | <b>1610</b> |

**Volume 291, Number 1, February 15, 2002**

|                                                                                                                                                                              |                                                                                                                                            |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----|
| Cyanide Binding to cd <sub>1</sub> Nitrite Reductase from <i>Pseudomonas aeruginosa</i> : Role of the Active-Site His369 in Ligand Stabilization                             | Wenliang Sun, Marzia Arese, Maurizio Brunori, Didier Nurizzo, Kieron Brown, Christian Cambillau, Mariella Tegoni, and Francesca Cutruzzolá | 1  |
| Mitochondrial Genome Content Is Regulated during Nematode Development                                                                                                        | William Y. Tsang and Bernard D. Lemire                                                                                                     | 8  |
| Genetic Variants of Human $\beta$ -Defensin-1 and Chronic Obstructive Pulmonary Disease                                                                                      | Ikumi Matsushita, Kyoko Hasegawa, Koh Nakata, Kazuki Yasuda, Katsushi Tokunaga, and Naoto Keicho                                           | 17 |
| DNA-Binding Properties of Mblk-1, a Putative Transcription Factor from the Honeybee                                                                                          | Jung-Min Park, Takekazu Kunieda, Hideaki Takeuchi, and Takeo Kubo                                                                          | 23 |
| <i>In Vitro</i> Induction of Bilirubin Conjugation in Primary Rat Hepatocyte Culture                                                                                         | Katalin Jemnitz, György Lengyel, and László Vereczkey                                                                                      | 29 |
| Long-Term Expression after Infection by the Hybrid Vector AdLTR-luc Is from Integrated Transgene                                                                             | Changyu Zheng and Bruce J. Baum                                                                                                            | 34 |
| WICH, a Novel Verprolin Homology Domain-Containing Protein That Functions Cooperatively with N-WASP in Actin-Microspike Formation                                            | Masayoshi Kato, Hiroaki Miki, Souichi Kurita, Takeshi Endo, Hiroyuki Nakagawa, Shigeaki Miyamoto, and Tadaomi Takenawa                     | 41 |
| Polyethylenimine-Mediated Suicide Gene Transfer Induces a Therapeutic Effect for Hepatocellular Carcinoma <i>in Vivo</i> by Using an Epstein-Barr Virus-Based Plasmid Vector | Masaki Iwai, Yoshinori Harada, Saiyu Tanaka, Akira Muramatsu, Takahiro Mori, Kei Kashima, Jiro Imanishi, and Osam Mazda                    | 48 |
| Pioglitazone Prevents Early-Phase Hepatic Fibrogenesis Caused by Carbon Tetrachloride                                                                                        | Kazuyoshi Kon, Kenichi Ikejima, Miyoko Hirose, Mutsuko Yoshikawa, Nobuyuki Enomoto, Tsuneo Kitamura, Yoshiyuki Takei, and Nobuhiro Sato    | 55 |
| Aberrant Expression of Centractin and Capping Proteins, Integral Constituents of the Dynactin Complex, in Fetal Down Syndrome Brain                                          | Talin Gulesserian, Seong Hwan Kim, Michael Fountoulakis, and Gert Lubec                                                                    | 62 |
| A Significant Role for the Heme Oxygenase-1 Gene in Endothelial Cell Cycle Progression                                                                                       | Taketoshi Kushida, Shuo Quan, Liming Yang, Susumu Ikehara, Attallah Kappas, and Nader G. Abraham                                           | 68 |
| Serum Bisphenol A Concentrations Showed Gender Differences, Possibly Linked to Androgen Levels                                                                               | Toru Takeuchi and Osamu Tsutsumi                                                                                                           | 76 |
| Inhibition of Nuclear Transport of Caspase-7 by Its Prodomain                                                                                                                | Yoshio Yaoita                                                                                                                              | 79 |



|                                                                                                                                                               |                                                                                                                                         |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------|
| Identification of Rat EMAP, a $\delta$ -Glutamate Receptor Binding Protein                                                                                    | <b>C. Dune Ly, Katherine W. Roche, Ho-Ki Lee, and Robert J. Wenthold</b>                                                                | <b>85</b>  |
| Eukaryotic Cell Determination of ExoS ADP-Ribosyltransferase Substrate Specificity                                                                            | <b>Jennifer E. Fraylick, Elizabeth A. Rucks, Deanne M. Greene, Timothy S. Vincent, and Joan C. Olson</b>                                | <b>91</b>  |
| NYD-SP6, a Novel Gene Potentially Involved in Regulating Testicular Development/Spermatogenesis                                                               | <b>Junhua Xiao, Min Xu, Jianmin Li, Hsiao Chang Chan, Min Lin, Hu Zhu, Wei Zhang, Zuomin Zhou, Baige Zhao, and Jiahao Sha</b>           | <b>101</b> |
| Cell Surface Expression of a Specific Antigenic Site on the Catalytic Subunit of (Na <sup>+</sup> + K <sup>+</sup> )-ATPase                                   | <b>Allen C. Myers, Bruce S. Bochner, Gordon F. Tomaselli, Neal Fedarko, Sherry A. Hudson, Holly Rohde, Shau-Ku Huang, and Kai Y. Xu</b> | <b>111</b> |
| 3D Model of Human Arylamine N-Acetyltransferase 2: Structural Basis of the Slow Acetylator Phenotype of the R64Q Variant and Analysis of the Active-Site Loop | <b>Fernando Rodrigues-Lima and Jean-Marie Dupret</b>                                                                                    | <b>116</b> |
| Functional Vanilloid Receptors in Cultured Normal Human Epidermal Keratinocytes                                                                               | <b>Kaori Inoue, Schuichi Koizumi, Shigeyoshi Fuziwara, Sumiko Denda, Kazuhide Inoue, and Mitsuhiro Denda</b>                            | <b>124</b> |
| Ets-1 Upregulates Matrix Metalloproteinase-1 Expression through Extracellular Matrix Adhesion in Vascular Endothelial Cells                                   | <b>Shinji Naito, Shunichi Shimizu, Mutsumi Matsuu, Masahiro Nakashima, Toshiyuki Nakayama, Shunichi Yamashita, and Ichiro Sekine</b>    | <b>130</b> |
| Involvement of ERK, p38 MAP Kinase, and PKC in MHC Class II-Mediated Signal Transduction in a Resting B Cell Line                                             | <b>Ju Kim, Hak-Ryul Kim, Jeong-Chae Lee, and Yong-Suk Jang</b>                                                                          | <b>139</b> |
| Unusual Signal Peptide Directs Penicillin Amidase from <i>Escherichia coli</i> to the Tat Translocation Machinery                                             | <b>Zoya Ignatova, Claudia Hörnle, Alan Nurk, and Volker Kasche</b>                                                                      | <b>146</b> |
| Hypoxia Inhibition of Apoptosis Induced by Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand (TRAIL)                                                    | <b>Sang-Youel Park, Timothy R. Billiar, and Dai-Wu Seol</b>                                                                             | <b>150</b> |
| Identification of RNA Species in the RNA-Toxin Complex and Structure of the Complex in <i>Clostridium botulinum</i> Type E                                    | <b>Masaru Kitamura</b>                                                                                                                  | <b>154</b> |
| Interaction Network of Human Aminoacyl-tRNA Synthetases and Subunits of Elongation Factor 1 Complex                                                           | <b>Jong Sang Lee, Sang Gyu Park, Heonyong Park, Wongi Seol, Sangwon Lee, and Sunghoon Kim</b>                                           | <b>158</b> |
| Mutational Analysis of the Autoprocessing Site of Subtilisin YaB-G124A                                                                                        | <b>Yuh-Shin Chang, Shwu-Huey Liaw, Hui-Ching Mei, Chih-Chieh Hsu, Chi-Yu Wu, and Ying-Chieh Tsai</b>                                    | <b>165</b> |
| Biphasic Oxidation of Mitochondrial NAD(P)H                                                                                                                   | <b>Victor V. Lemesko</b>                                                                                                                | <b>170</b> |

|                                                                                                                                                                                                             |                                          |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------|
| Molecular Basis of Bird Respiration: Primary Hemoglobin Structure Component from Tufted Duck ( <i>Aythya fuligula</i> , Anseriformes)—Role of $\alpha 99$ Arg in Formation of a Complex Salt Bridge Network | <b>Atiya Abbasi and Ghosia Lutfullah</b> | <b>176</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------|

|                                                                                                            |                                                                                             |            |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------|
| Cell Adhesion Regulates the Plasminogen Activator Inhibitor-1 Gene Expression in Anchorage-Dependent Cells | <b>Chun-Chung Lee, Kou-Gi Shyu, Shankung Lin, Bao-Wei Wang, Ya-Chen Liu, and Hang Chang</b> | <b>185</b> |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------|

## ERRATA

|                                                                                                                                                                                                                                                                                                                                       |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Volume <b>287</b> , Number 4 (2001), in the article “Ets-2 Is Induced by Oxidative Stress and Sensitizes Cells to H <sub>2</sub> O <sub>2</sub> -Induced Apoptosis: Implications for Down’s Syndrome,” by E. Sanij, T. Hatzistavrou, P. Crack, P. Hertzog, I. Kola, and E. J. Wolvetang, pages 1003-1008 (doi:10.1006/bbrc.2001.5680) | <b>191</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|

|                                                                                                                                                                                                                                                                                                                                                  |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Volume <b>290</b> , Number 2 (2002), in the article “Roles of DNA Fragmentation Factor and Poly(ADP-ribose)Polymerase-1 in Sensitization of Fibroblasts to Tumor Necrosis Factor-Induced Apoptosis,” by A. Hamid Boulares, Anna J. Zoltoski, Zaki A. Sherif, Alexander Yakovlev, and Mark E. Smulson, pages 796-801 (doi:10.1006/bbrc.2001.6280) | <b>191</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|

## Number 2, February 22, 2002

|                                                                                                                                     |                                                                                                                     |            |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------|
| The EGF-like Homeotic Protein dlk Affects Cell Growth and Interacts with Growth-Modulating Molecules in the Yeast Two-Hybrid System | <b>Victoriano Baladrón, María José Ruiz-Hidalgo, Ezio Bonvini, Elena Gubina, Vicente Notario, and Jorge Laborda</b> | <b>193</b> |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------|

|                                                                                                                                           |                                     |            |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------|
| DNA Chain Unwinding and Annealing Reactions of Lipocortin (Annexin) I Heterotetramer: Regulation by Ca <sup>2+</sup> and Mg <sup>2+</sup> | <b>Aiko Hirata and Fusao Hirata</b> | <b>205</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------|

|                                            |                                                                                                                                                        |            |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Interchromosomal Telomere Length Variation | <b>Takeshi Suda, Asao Fujiyama, Mitsuhiro Takimoto, Masato Igarashi, Takashi Kuroiwa, Nobuo Waguri, Hirokazu Kawai, Yusaku Mita, and Yutaka Aoyagi</b> | <b>210</b> |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------|

|                                                                      |                                                                  |            |
|----------------------------------------------------------------------|------------------------------------------------------------------|------------|
| Inhibition of the Mitochondrial Permeability Transition by Aldehydes | <b>William A. Irwin, Lawrence D. Gaspers, and John A. Thomas</b> | <b>215</b> |
|----------------------------------------------------------------------|------------------------------------------------------------------|------------|

|                                                                                                                              |                                       |            |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------|
| Characterization of a Cytochrome <i>b</i> <sub>558</sub> Ferric/Cupric Reductase from Rabbit Duodenal Brush Border Membranes | <b>Martin Knöpfel and Marc Solioz</b> | <b>220</b> |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------|

|                                                                         |                                              |            |
|-------------------------------------------------------------------------|----------------------------------------------|------------|
| Avian TVB (DR5-like) Death Receptor Expression in Hen Ovarian Follicles | <b>Jamie T. Bridgham and Alan L. Johnson</b> | <b>226</b> |
|-------------------------------------------------------------------------|----------------------------------------------|------------|

|                                                                                                                                       |                                                             |            |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------|
| IFN- $\gamma$ Inhibition of TRAIL-Induced IAP-2 Upregulation, a Possible Mechanism of IFN- $\gamma$ -Enhanced TRAIL-Induced Apoptosis | <b>Sang-Youel Park, Timothy R. Billiar, and Dai-Wu Seol</b> | <b>233</b> |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------|



|                                                                                                                                                     |                                                                                                                                                            |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Mechanisms of L-Selectin-Induced Activation of the Nuclear Factor of Activated T Lymphocytes (NFAT)                                                 | Birgit C. Brenner, Stephanie Kadel, Sergei Grigovich, and Otwin Linderkamp                                                                                 | 237 |
| Alternative Transcripts of a <i>polyhomeotic</i> Gene Homolog Are Expressed in Distinct Regions of Somites during Segmentation of Zebrafish Embryos | Akinori Kawamura, Kouji Yamada, Ken'ichi Fujimori, and Toru Higashinakagawa                                                                                | 245 |
| Abnormal Expression of Neuronal Nitric Oxide Synthase Triggers Limbic Seizures and Hippocampal Damage in Rat                                        | Giacinto Bagetta, Anna Maria Paoletti, Aida Leta, Claudio Del Duca, Robert Nisticò, D. Rotiroti, and M. Tiziana Corasaniti                                 | 255 |
| Paracrine Repercussions of Preconditioning on Angiogenesis and Apoptosis of Endothelial Cells                                                       | Marc-André Raymond, Normand Vigneault, Valerie Luyckx, and Marie-Josée Hébert                                                                              | 261 |
| Transcriptional Regulation of the Rat Mrp3 Promoter in Intestine Cells                                                                              | Shwu-Jen Tzeng and Jin-ding Huang                                                                                                                          | 270 |
| A Single Amino Acid Mutation Results in a Rapid Inactivation of Epithelial Calcium Channels                                                         | Makoto Suzuki, Gaku Ohki, Kenichi Ishibashi, and Masashi Imai                                                                                              | 278 |
| Characterization of a Novel Testicular Form of Human Hormone-Sensitive Lipase                                                                       | Aline Mairal, Nathalie Melaine, Henrik Laurell, Jacques Grober, Lena Stenson Holst, Thierry Guillaudeux, Cecilia Holm, Bernard Jégou, and Dominique Langin | 286 |
| Transport of D-Serine via the Amino Acid Transporter ATB <sup>0,+</sup> Expressed in the Colon                                                      | Takahiro Hatanaka, Wei Huang, Takeo Nakanishi, Christy C. Bridges, Sylvia B. Smith, Puttur D. Prasad, Malliga E. Ganapathy, and Vadivel Ganapathy          | 291 |
| DAP12 ITAM Motif Regulates Differentiation and Apoptosis in M1 Leukemia Cells                                                                       | Naoko Aoki, Shoji Kimura, Kensuke Oikawa, Hitoshi Nochi, Yoshiaki Atsuta, Hiroya Kobayashi, Keisuke Sato, and Makoto Katagiri                              | 296 |
| Functional Redundancy in the Myotubularin Family                                                                                                    | Jocelyn Laporte, Laurence Liaubet, François Blondeau, Hélène Tronchère, Jean-Louis Mandel, and Bernard Payrastre                                           | 305 |
| Cloning and Functional Expression of the First <i>Drosophila melanogaster</i> Sulfakinin Receptor DSK-R1                                            | Teresa M. Kubiak, Martha J. Larsen, Katherine J. Burton, Carol A. Bannow, Roger A. Martin, Marjorie R. Zantello, and David E. Lowery                       | 313 |
| Calpain Activation after Mitochondrial Permeability Transition in Microcystin-Induced Cell Death in Rat Hepatocytes                                 | Wen-Xing Ding, Han-Ming Shen, and Choon-Nam Ong                                                                                                            | 321 |
| Lack of Contribution of Mitochondrial Electron Transport to Acute O <sub>2</sub> Sensing in Model Airway Chemoreceptors                             | Gavin J. Searle, Matthew E. Hartness, Rachel Hoareau, Chris Peers, and Paul J. Kemp                                                                        | 332 |

|                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                     |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Mutation in the <i>Xanthomonas campestris</i> <i>xanA</i> Gene Required for Synthesis of Xanthan and Lipopolysaccharide Drastically Reduces the Efficiency of Bacteriophage $\phi$ L7 Adsorption    | <b>Chih-Hsin Hung, Hsung-Chi Wu, and Yi-Hsiung Tseng</b>                                                                                                                                                                                                            | <b>338</b> |
| Simultaneous Detection of Thiamine and Its Phosphate Esters from Microalgae by HPLC                                                                                                                 | <b>Ernani Pinto, Marianne Pedersén, Pauli Snoeijs, Lies Van Nieuwerburgh, and Pio Colepicolo</b>                                                                                                                                                                    | <b>344</b> |
| Mixed Tocopherol Preparation Is Superior to $\alpha$ -Tocopherol Alone against Hypoxia-Reoxygenation Injury                                                                                         | <b>Hongjiang Chen, Dayuan Li, Tom Saldeen, Francesco Romeo, and Jawahar L. Mehta</b>                                                                                                                                                                                | <b>349</b> |
| Terpenoids Found in the Umbelliferae Family Act as Agonists/Antagonists for ER $\alpha$ and ER $\beta$ : Differential Transcription Activity between Ferutinine-Liganded ER $\alpha$ and ER $\beta$ | <b>Kazuhiro Ikeda, Yukitomo Arao, Hiroko Otsuka, Satoshi Nomoto, Hyogo Horiguchi, Shigeaki Kato, and Fujio Kayama</b>                                                                                                                                               | <b>354</b> |
| Direct Atomic Force Microscopy Visualization of Integration Host Factor-Induced DNA Bending Structure of the Promoter Regulatory Region on the <i>Pseudomonas</i> TOL Plasmid                       | <b>Gi Hun Seong, Eiry Kobatake, Koshiro Miura, Atsushi Nakazawa, and Masuo Aizawa</b>                                                                                                                                                                               | <b>361</b> |
| Positively Charged DNA-Binding Proteins Cause Apparent Cell Membrane Translocation                                                                                                                  | <b>Mathias Lundberg and Magnus Johansson</b>                                                                                                                                                                                                                        | <b>367</b> |
| Ablation of Cellular Prion Protein Expression Affects Mitochondrial Numbers and Morphology                                                                                                          | <b>Gino Miele, Martin Jeffrey, Doug Turnbull, Jean Manson, and Michael Clinton</b>                                                                                                                                                                                  | <b>372</b> |
| A Link between Cholesterol Levels and Phenobarbital Induction of Cytochromes P450                                                                                                                   | <b>Jean-Claude Ourlin, Christoph Handschin, Michel Kaufmann, and Urs A. Meyer</b>                                                                                                                                                                                   | <b>378</b> |
| Titin Mutations as the Molecular Basis for Dilated Cardiomyopathy                                                                                                                                   | <b>Manatsu Itoh-Satoh, Takeharu Hayashi, Hirofumi Nishi, Yoshinori Koga, Takuro Arimura, Takeshi Koyanagi, Megumi Takahashi, Shigeru Hohda, Kazuo Ueda, Tatsuhito Nouchi, Michiaki Hiroe, Fumiaki Marumo, Tsutomu Imaizumi, Michio Yasunami, and Akinori Kimura</b> | <b>385</b> |
| Insulin Stimulates Nitric Oxide Production in Rat Adipocytes                                                                                                                                        | <b>Catherine Ribi  re, Anne-Marie Jaubert, Dominique Sabourault, Dani  le Lacasa, and Yves Giudicelli</b>                                                                                                                                                           | <b>394</b> |
| Cloning and Expression of a Full-Length cDNA Encoding Human Inositol 1,4,5-Trisphosphate 3-Kinase B                                                                                                 | <b>Val  rie Dewaste, Dirk Roymans, Colette Moreau, and Christophe Erneux</b>                                                                                                                                                                                        | <b>400</b> |
| Molecular Cloning, Gene Localization, and Structure of Human Cyclin B3                                                                                                                              | <b>Jean-Claude Lozano, Eric Perret, Philippe Schatt, C  cile Arnould, G  rard Peaucellier, and Andr   Picard</b>                                                                                                                                                    | <b>406</b> |
| Cloning, Characterization, and Expression of Calcyphosine 2, a Novel Human Gene Encoding an EF-Hand Ca <sup>2+</sup> -Binding Protein                                                               | <b>Shu Wang, Jin-zhong Chen, Zhen Zhang, Qingshan Huang, Shaohua Gu, Kang Ying, Yi Xie, and Yumin Mao</b>                                                                                                                                                           | <b>414</b> |



|                                                                                                          |                                                                                                                                                  |     |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Activation by Acidic pH of CLC-7 Expressed in Oocytes from <i>Xenopus laevis</i>                         | Linda Diewald, Johanna Rupp, Mathias Dreger, Ferdinand Hucho, Clemens Gillen, and Hermann Nawrath                                                | 421 |
| Activity Enhancement of Cel5Z from <i>Pectobacterium chrysanthemi</i> PY35 by Removing C-Terminal Region | Sang Ryeol Park, Soo Jeong Cho, Min Keun Kim, Sung Kee Ryu, Woo Jin Lim, Chang Long An, Su Young Hong, Jeong Hwan Kim, Hoon Kim, and Han Dae Yun | 425 |

## ERRATUM

|                                                                                                                                                                                                                                                                                                 |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Volume 290, Number 4 (2002), in the article "Alteration of Stringent Response of the <i>Escherichia coli</i> <i>rnpB</i> Promoter by Mutations in the -35 Region," by Jeong Won Park, Yongwon Jung, Sang Joon Lee, Ding J. Jin, and Younghoon Lee, pages 1183-1187 (doi:10.1006/bbrc.2001.6331) | 431 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

## Number 3, March 1, 2002

|                                                                                                                                                                 |                                                                                                                               |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----|
| Doxorubicin and C-13 Deoxydoxorubicin Effects on Ryanodine Receptor Gene Expression                                                                             | Herve A. Gambliel, Briant E. Burke, Barry J. Cusack, Gerald M. Walsh, Yumei L. Zhang, Philip S. Mushlin, and Richard D. Olson | 433 |
| Insulin-Stimulated Fatty Acid Synthase Gene Expression Does Not Require Increased Sterol Response Element Binding Protein 1 Transcription in Primary Adipocytes | D. Gail Palmer, Guy A. Rutter, and Jeremy M. Tavaré                                                                           | 439 |
| Protein Kinase D Is a Downstream Target of Protein Kinase C $\theta$                                                                                            | Jingzhen Yuan, David Bae, Doreen Cantrell, Andre E. Nel, and Enrique Rozengurt                                                | 444 |
| Heat Shock Inhibits Activation of NF- $\kappa$ B in the Absence of Heat Shock Factor-1                                                                          | Vivek Malhotra, Tonyia Eaves-Pyles, Kelli Odoms, Gina Quaid, Thomas P. Shanley, and Hector R. Wong                            | 453 |
| Dominant Negative $\alpha$ -Subunit of FTase Inhibits Effects of Insulin and IGF-I in MCF-7 Cells                                                               | Curtis Scott Solomon and Marc Lee Goalstone                                                                                   | 458 |
| MUC17, a Novel Membrane-Tethered Mucin                                                                                                                          | James R. Gum, Jr., Suzanne C. Crawley, James W. Hicks, David E. Szymkowski, and Young S. Kim                                  | 466 |
| Occurrence of Cu-ATPase in <i>Dictyostelium</i> : Possible Role in Resistance to Copper                                                                         | Bruno Burlando, Valentina Evangelisti, Francesco Dondero, Giovanni Pons, Jim Camakaris, and Aldo Viarengo                     | 476 |
| Death Effector Domain-Only Polypeptides of Caspase-8 and -10 Specifically Inhibit Death Receptor-Induced Cell Death                                             | Yoshiaki Shikama, Lisong Shen, Motokuni Yonetani, Jun Miyauchi, Toshiyuki Miyashita, and Masao Yamada                         | 484 |
| Possible Implication of Golgi-Nucleating Function for the Centrosome                                                                                            | Akira Takatsuki, Machiko Nakamura, and Yoshiki Kono                                                                           | 494 |

|                                                                                                                                                        |                                                                                                                                                                                        |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| A Discrete Domain of the Human TrkB Receptor Defines the Binding Sites for BDNF and NT-4                                                               | Ruth L. Naylor, Alan G. S. Robertson, Shelley J. Allen, Richard B. Sessions, Anthony R. Clarke, Grant G. F. Mason, Judy J. Burston, Sue J. Tyler, Gordon K. Wilcock, and David Dawbarn | 501 |
| Nuclear Translocation of Mouse Polycomb M33 Protein in Regenerating Liver                                                                              | Kousei Noguchi, Robert Shiurba, and Toru Higashinakagawa                                                                                                                               | 508 |
| Regulation of <i>Trypanosoma cruzi</i> Invasion of Nonphagocytic Cells by the Endocytically Active GTPases Dynamin, Rab5, and Rab7                     | S. E. Wilkowsky, M. A. Barbieri, P. D. Stahl, and E. L. D. Isola                                                                                                                       | 516 |
| Characterization of Adiposity and Metabolism in <i>Lmna</i> -Deficient Mice                                                                            | Dedra A. Cutler, Teresa Sullivan, Bernice Marcus-Samuels, Colin L. Stewart, and Marc L. Reitman                                                                                        | 522 |
| Use of gDNA as Internal Standard for Gene Expression in Staphylococci <i>in Vitro</i> and <i>in Vivo</i>                                               | S. J. Vandecasteele, W. E. Peetermans, R. Merckx, M. Van Ranst, and J. Van Eldere                                                                                                      | 528 |
| Structural Domains of Vault Proteins: A Role for the Coiled Coil Domain in Vault Assembly                                                              | Arend van Zon, Marieke H. Mossink, Martijn Schoester, George L. Scheffer, Rik J. Scheper, Pieter Sonneveld, and Erik A. C. Wiemer                                                      | 535 |
| Inhibition of the Ubiquitin-Proteasome Pathway Induces Differential Heat-Shock Protein Response in Cardiomyocytes and Renders Early Cardiac Protection | Karl Stangl, Christoph Günther, Thomas Frank, Mario Lorenz, Silke Meiners, Thorsten Röpke, Lars Stelter, Minoo Moobed, Gert Baumann, Peter-Michael Klotzel, and Verena Stangl          | 542 |
| Ebselen Has Dehydroascorbate Reductase and Thioltransferase-like Activities                                                                            | Che-Hun Jung, Michael P. Washburn, and William W. Wells                                                                                                                                | 550 |
| Soluble Flt-1 (Soluble VEGFR-1), a Potent Natural Antiangiogenic Molecule in Mammals, Is Phylogenetically Conserved in Avians                          | Sachiko Yamaguchi, Kumi Iwata, and Masabumi Shibuya                                                                                                                                    | 554 |
| Regulation of Cap-Dependent Translation by Insulin-like Growth Factor-1 in Neuronal Cells                                                              | Celia Quevedo, Matilde Salinas, and Alberto Alcázar                                                                                                                                    | 560 |
| Cloning and Characterization of the Human <i>BAZF</i> Gene, a Homologue of the <i>BCL6</i> Oncogene                                                    | Chizuko Sakashita, Tetsuya Fukuda, Shinichiro Okabe, Hirofumi Kobayashi, Shinsaku Hirose, Takeshi Tokuhisa, Nobuyuki Miyasaka, Osamu Miura, and Tohru Miki                             | 567 |
| Phosphorylation of the N-Terminal and C-Terminal CD3- $\epsilon$ -ITAM Tyrosines Is Differentially Regulated in T Cells                                | María Guirado, Isabel de Aós, Teresa Orta, Luis Rivas, Cox Terhorst, Mercedes Zubiaur, and Jaime Sancho                                                                                | 574 |
| Hes-1, a Known Transcriptional Repressor, Acts as a Transcriptional Activator for the Human Acid $\alpha$ -Glucosidase Gene in Human Fibroblast Cells  | Bo Yan, Nina Raben, and Paul H. Plotz                                                                                                                                                  | 582 |



|                                                                                                                                                |                                                                                                                                                                                              |     |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Differential Role of MAP Kinases in Stimulation of Hepatocyte Growth by EGF and G-Protein-Coupled Receptor Agonists                            | Laila S. Nilssen, G. Hege Thoresen, Thoralf Christoffersen, and Dagny Sandnes                                                                                                                | 588 |
| Substrate Specificity of Penicillin Acylase from <i>Streptomyces lavendulae</i>                                                                | Raquel Torres-Guzmán, Isabel de la Mata, Jesús Torres-Bacete, Miguel Arroyo, María Pilar Castellón, and Carmen Acebal                                                                        | 593 |
| The ATP Binding Cassette Transporter A1 Contributes to the Secretion of Interleukin 1 $\beta$ from Macrophages but Not from Monocytes          | Xiaoqin Zhou, Thomas Engel, Christian Goepfert, Michael Erren, Gerd Assmann, and Arnold von Eckardstein                                                                                      | 598 |
| Catalytic Antibody Therapy against the Insecticide Carbaryl                                                                                    | Jun Wang, Yunqing Han, Shizhong Liang, and Miles F. Wilkinson                                                                                                                                | 605 |
| P2X <sub>1</sub> Receptor Subunit Contribution to Gating Revealed by a Dominant Negative PKC Mutant                                            | Steven J. Ennion and Richard J. Evans                                                                                                                                                        | 611 |
| Role of the Multidrug Resistance Protein 1 in Protection from Heavy Metal Oxyanions: Investigations <i>in Vitro</i> and in MRP1-Deficient Mice | Aurelio Lorico, Antonella Bertola, Christopher Baum, Oystein Fodstad, and Germana Rappa                                                                                                      | 617 |
| Restricted Expression of Calcium-Binding Protein S100A5 in Human Kidney                                                                        | Takumi Teratani, Takumi Watanabe, Kaori Yamahara, Hiromichi Kumagai, Akira Ishikawa, Kazumori Arai, and Ryushi Nozawa                                                                        | 623 |
| Phosphorylation of Fanconi Anemia Protein, FANCA, Is Regulated by Akt Kinase                                                                   | Tetsuya Otsuki, Takahiro Nagashima, Norio Komatsu, Keita Kirito, Yusuke Furukawa, Shin-ichi Kobayashi, Johnson M. Liu, and Keiya Ozawa                                                       | 628 |
| Characterization of a Kunitz Trypsin Inhibitor with One Disulfide Bridge Purified from <i>Swartzia pickellii</i>                               | Maria do Socorro M. Cavalcanti, Maria Luiza V. Oliva, Hans Fritz, Marianne Jochum, Reinhardt Mentele, Misako Sampaio, Luana C. B. B. Coelho, Isabel F. C. Batista, and Claudio A. M. Sampaio | 635 |
| Synthesis, 3-D Structure, and Pharmacology of a Reticulated Chimeric Peptide Derived from Maurotoxin and Tsk Scorpion Toxins                   | Ziad Fajloun, Gilles Ferrat, Edmond Carlier, Sarrah M'Barek, Imed Regaya, Mohamed Fathallah, Hervé Rochat, Hervé Darbon, Michel de Waard, and Jean-Marc Sabatier                             | 640 |
| Islet-Neogenesis-Associated Protein Enhances Neurite Outgrowth from DRG Neurons                                                                | Joseph Tam, Lawrence Rosenberg, and Dusica Maysinger                                                                                                                                         | 649 |
| Characterization of a Smad Motif Similar to <i>Drosophila</i> Mad in the Mouse <i>Msx 1</i> Promoter                                           | Cristina E. Alvarez Martinez, Renata Binato, Sayonara Gonzalez, Monica Pereira, Benoit Robert, and Eliana Abdelhay                                                                           | 655 |
| Regulation of Cyclic AMP-Dependent Response Element-Binding Protein (CREB) by the Nociceptin/Orphanin FQ in Human Dopaminergic SH-SY5Y Cells   | Myung-Sunny Kim, Young-Pyo Cheong, Hong-Seob So, Kang-Min Lee, Yong Son, Chang-Soo Lee, Jae-Seung Yun, and Raekil Park                                                                       | 663 |

|                                                                                                                                         |                                                                                                                                                                               |     |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Synergistic Effect of Cold Mannitol and Na <sup>+</sup> /Ca <sup>2+</sup> Exchange Blocker on Blood-Brain Barrier Opening               | Mitsuru Ikeda, Abesh Kumar Bhattacharjee, Takeshi Kondoh, Tatsuya Nagashima, and Norihiko Tamaki                                                                              | 669 |
| Atrophic Change of Rat Salivary Gland during Adenovirus-Induced Hyperleptinemia                                                         | Moritake Higa, Michio Shimabukuro, Mari Fukuchi, Ichiro Komiya, and Nobuyuki Takasu                                                                                           | 675 |
| Bisphosphonates Pamidronate and Zoledronic Acid Stimulate Osteoprotegerin Production by Primary Human Osteoblasts                       | Volker Viereck, Günter Emons, Vanessa Lauck, Karl-Heinz Frosch, Sabine Blaschke, Carsten Gründker, and Lorenz C. Hofbauer                                                     | 680 |
| Lysophosphatidic Acid Stimulates p21-Activated Kinase in Vascular Smooth Muscle Cells                                                   | Udo Schmitz, Kerstin Thömmes, Imke Beier, and Hans Vetter                                                                                                                     | 687 |
| Identification of an Endocrine Disrupting Agent from Corn with Mitogenic Activity                                                       | Barry M. Markaverich, Mary Ann Alejandro, David Markaverich, Lois Zitzow, Nancy Casajuna, Nathan Camarao, Jamal Hill, Ken Bhirdo, Robert Faith, John Turk, and Jan R. Crowley | 692 |
| Myostatin Knockout in Mice Increases Myogenesis and Decreases Adipogenesis                                                              | Ji Lin, Heather B. Arnold, Mary Anne Della-Fera, Michael J. Azain, Diane L. Hartzell, and Clifton A. Baile                                                                    | 701 |
| <i>Mga2p</i> Is a Putative Sensor for Low Temperature and Oxygen to Induce <i>OLE1</i> Transcription in <i>Saccharomyces cerevisiae</i> | Youji Nakagawa, Naoko Sakumoto, Yoshinobu Kaneko, and Satoshi Harashima                                                                                                       | 707 |
| Induction of Global Stress Response in <i>Saccharomyces cerevisiae</i> Cells Lacking Telomerase                                         | Shu-Chun Teng, Charles Epstein, Yun-Luen Tsai, Hui-Wen Cheng, Hung-Lin Chen, and Jing-Jer Lin                                                                                 | 714 |
| Metformin Restores Responses to Insulin but Not to Growth Hormone in Sprague-Dawley Rats                                                | Stephen E. Borst, Harold G. Snellen, Henry Ross, Philip J. Scarpace, and Yong-Woon Kim                                                                                        | 722 |

Number 4, March 8, 2002

## BREAKTHROUGHS AND VIEWS

|                                                                                      |             |     |
|--------------------------------------------------------------------------------------|-------------|-----|
| Insights of High-Density Lipoprotein Apolipoprotein-Mediated Lipid Efflux from Cells | Guorong Lin | 727 |
|--------------------------------------------------------------------------------------|-------------|-----|

## REGULAR ARTICLES

|                                                                                                                                             |                                                                 |     |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----|
| Gurken, a TGF- $\alpha$ -like Protein Involved in Axis Determination in <i>Drosophila</i> , Directly Binds to the EGF-Receptor Homolog Egfr | Anat Shmueli, Orit Cohen-Gazala, and F. Shira Neuman-Silberberg | 732 |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----|



|                                                                                                                                                  |                                                                                                                                                                                                                                               |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Mechanisms of the Protective Effect of L-Alanine to D-Galactosamine-Induced Hepatocellular Injury: Comparative Studies of L-Alanine and Pyruvate | Sonoko Ishizaki-Koizumi, Ichiro Sonaka, Shoji Fujitani, and Shuhei Nishiguchi                                                                                                                                                                 | 738 |
| The CrkL Adapter Protein Is Required for Type I Interferon-Dependent Gene Transcription and Activation of the Small G-Protein Rap1               | Fatima Lekmine, Antonella Sassano, Shahab Uddin, Beata Majchrzak, Osamu Miura, Brian J. Druker, Eleanor N. Fish, Akira Imamoto, and Leonidas C. Platanias                                                                                     | 744 |
| Lysine Can Be Replaced by Histidine but Not by Arginine as the ER Retrieval Motif for Type I Membrane Proteins                                   | Birgit Hardt and Ernst Bause                                                                                                                                                                                                                  | 751 |
| Detoxification of Oxidized LDL by Transferring Its Oxidation Product(s) to Lecithin:Cholesterol Acyltransferase                                  | Zakir H. Howlader, Shin Kamiyama, Hitoshi Shirakawa, Yohei Murakami, Michiko Ito, Michio Komai, Koji Muramoto, and Yuji Furukawa                                                                                                              | 758 |
| Poly-L-lysine Dissolves Fibrillar Aggregation of the Alzheimer $\beta$ -Amyloid Peptide <i>in Vitro</i>                                          | Khue Vu Nguyen, Jean-Louis Gendrault, and Charles-Michel Wolff                                                                                                                                                                                | 764 |
| <i>Pyrococcus</i> Prefoldin Stabilizes Protein-Folding Intermediates and Transfers Them to Chaperonins for Correct Folding                       | Mina Okochi, Takao Yoshida, Tadashi Maruyama, Yutaka Kawarabayasi, Hisashi Kikuchi, and Masafumi Yohda                                                                                                                                        | 769 |
| Functional Diversity among Notch1, Notch2, and Notch3 Receptors                                                                                  | Kiyoshi Shimizu, Shigeru Chiba, Toshiki Saito, Keiki Kumano, Yoshio Hamada, and Hisamaru Hirai                                                                                                                                                | 775 |
| Cytotoxicity of IFN- $\gamma$ and TNF- $\alpha$ for Vascular Endothelial Cell Is Mediated by Nitric Oxide                                        | Junichi Yamaoka, Kenji Kabashima, Michiko Kawanishi, Ken-Ichi Toda, and Yoshiki Miyachi                                                                                                                                                       | 780 |
| Global Analysis of Gene Expression in Renal Ischemia-Reperfusion in the Mouse                                                                    | Takumi Yoshida, Shiow-Shih Tang, Li-Li Hsiao, Roderick V. Jensen, Julie R. Ingelfinger, and Steven R. Gullans                                                                                                                                 | 787 |
| Linear Correlation between Thermal Stability and Folding Kinetics of Lysozyme                                                                    | Aoneng Cao, Gang Wang, Youqi Tang, and Luhua Lai                                                                                                                                                                                              | 795 |
| Molecular Cloning and Developmental Expression of Zinc Finger Transcription Factor MTF-1 Gene in Zebrafish, <i>Danio rerio</i>                   | Wen-Ya Chen, Joseph Abraham Christopher John, Chen-Hui Lin, and Chi-Yao Chang                                                                                                                                                                 | 798 |
| Molecular Basis for the Inhibition of Hypoxia-Induced Apoptosis by 2-Deoxy-D-ribose                                                              | Ryuji Ikeda, Tatsuhiko Furukawa, Masaki Kitazono, Kenji Ishitsuka, Hiroshi Okumura, Ayako Tani, Tomoyuki Sumizawa, Misako Haraguchi, Masaharu Komatsu, Hiroshi Uchimiya, Xiao-Qin Ren, Toshiro Motoya, Katsushi Yamada, and Shin-ichi Akiyama | 806 |
| The Atomic Structure of Human Methemalbumin at 1.9 Å                                                                                             | Mark Wardell, Zhongmin Wang, Joseph X. Ho, Justin Robert, Florian Ruker, John Ruble, and Daniel C. Carter                                                                                                                                     | 813 |

|                                                                                                                                                                     |                                                                                                                                                                            |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| TEL Induces Aggregation in Transformed Cells and Induces Tube Formation in NIH3T3-UCLA Cells                                                                        | L. Van Rompaey, E. Holland, and G. Grosveld                                                                                                                                | 820 |
| Hyaluronan Binding Protein 1 (HABP1)/C1QBP/p32 Is an Endogenous Substrate for MAP Kinase and Is Translocated to the Nucleus upon Mitogenic Stimulation              | M. Majumdar, J. Meenakshi, S. K. Goswami, and K. Datta                                                                                                                     | 829 |
| Exip, a New Alternative Splicing Variant of p38 $\alpha$ , Can Induce an Earlier Onset of Apoptosis in HeLa Cells                                                   | Tatsuhiko Sudo, Yuki Yagasaki, Hiroshi Hama, Naoko Watanabe, and Hiroyuki Osada                                                                                            | 838 |
| Specific Granules of Human Eosinophils Have Lysosomal Characteristics: Presence of Lysosome-Associated Membrane Proteins and Acidification upon Cellular Activation | Terese Persson, Jero Calafat, Hans Janssen, Malgorzata Karawajczyk, Sven R. Carlsson, and Arne Egesten                                                                     | 844 |
| Suicide Gene Therapy of Human Hepatoma and Its Peritonitis Carcinomatosis by a Vector of Replicative-Deficient Herpes Simplex Virus                                 | Masaki Iwai, Yoshinori Harada, Michiaki Ishii, Kei Kashima, Osam Mazda, Masakazu Tamura, Darren Wolfe, William F. Goin, and Joseph C. Glorioso                             | 855 |
| Arsenic Trioxide-Induced Apoptosis and Its Enhancement by Buthionine Sulfoximine in Hepatocellular Carcinoma Cell Lines                                             | Mariko Kito, Yukihiro Akao, Nobuko Ohishi, Kunio Yagi, and Yoshinori Nozawa                                                                                                | 861 |
| <i>Helicobacter pylori</i> Activates the Proto-oncogene <i>c-fos</i> through SRE Transactivation                                                                    | Yuzo Mitsuno, Shin Maeda, Haruhiko Yoshida, Yoshihiro Hirata, Keiji Ogura, Masao Akanuma, Takao Kawabe, Yasushi Shiratori, and Masao Omata                                 | 868 |
| Biophysical Characterization of Cyclic Nucleotide Phosphodiesterases                                                                                                | Andreas Hofmann, Sergey Tarasov, Melissa Grella, Sergei Ruvinov, Fahd Nasr, Witold Filipowicz, and Alexander Wlodawer                                                      | 875 |
| Identification and Characterization of a Novel Type of Membrane-Associated Prostaglandin E Synthase                                                                 | Naomi Tanikawa, Yoshihiro Ohmiya, Hiroaki Ohkubo, Katsuyuki Hashimoto, Kenji Kangawa, Masami Kojima, Seiji Ito, and Kikuko Watanabe                                        | 884 |
| Inhibitory Effects of IFN- $\gamma$ on HIV-1 Replication in Latently Infected Cells                                                                                 | Lilen C. Sarol, Kenichi Imai, Kaori Asamitsu, Toshifumi Tetsuka, Nina G. Barzaga, and Takashi Okamoto                                                                      | 890 |
| GC-Rich Elements Flanking the Transcription Start Site Govern Strong Activation on the SNURF Gene                                                                   | Sirpa J. Hirvonen, Henrikki Santti, Olli A. Jänne, and Jorma J. Palvimo                                                                                                    | 897 |
| Manipulation of Unfolding-Induced Protein Aggregation by Peptides Selected for Aggregate-Binding Ability through Phage Display Library Screening                    | Bishwajit Kundu, Anshuman Shukla, and Purnananda Guptasarma                                                                                                                | 903 |
| Stabilization of Vascular Endothelial Growth Factor mRNA by Hypoxia-Inducible Factor 1                                                                              | Louis X. Liu, Hsienwie Lu, Yuxia Luo, Taro Date, Adam J. Belanger, Karen A. Vincent, Geoffrey Y. Akita, Mark Goldberg, Seng H. Cheng, Richard J. Gregory, and Canwen Jiang | 908 |



|                                                                                                                                                                                                              |                                                                                                                                           |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------|
| Gonadotropin-Releasing Hormone Stimulates Annexin 5 Messenger Ribonucleic Acid Expression in the Anterior Pituitary Cells                                                                                    | Mitsumori Kawaminami,<br>Yoshiyuki Tsuchiyama, Shihori Saito,<br>Mikio Katayama, Shiro Kurusu,<br>and Inoru Hashimoto                     | 915  |
| Catalytic Function of a Novel Protein Protochlorophyllide Oxidoreductase C of <i>Arabidopsis thaliana</i>                                                                                                    | Gopal K. Pattanayak<br>and Baishnab C. Tripathy                                                                                           | 921  |
| Selection and Stabilization of the RNA Aptamers against the Human Immunodeficiency Virus Type-1 Nucleocapsid Protein                                                                                         | Se Jin Kim, Mee Young Kim, Jae Ho Lee,<br>Ji Chang You, and Sunjoo Jeong                                                                  | 925  |
| Mutational Analysis of a Mammalian Reovirus mRNA Capping Enzyme                                                                                                                                              | Cindy L. Luongo                                                                                                                           | 932  |
| Cloning and Expression of a Lombricine Kinase from an Echiuroid Worm: Insights into Structural Correlates of Substrate Specificity                                                                           | W. Ross Ellington and J. Bush                                                                                                             | 939  |
| Overexpression of Protein-Tyrosine Phosphatase PTP $\sigma$ Is Linked to Impaired Glucose-Induced Insulin Secretion in Hereditary Diabetic Goto-Kakizaki Rats                                                | Claes-Göran Östenson,<br>Ann-Christine Sandberg-Nordqvist,<br>Jie Chen, Mattias Hällbrink, Daniela Rotin,<br>Ülo Langel, and Suad Efendic | 945  |
| Identification of AHNAK as a Novel Autoantigen in Systemic Lupus Erythematosus                                                                                                                               | Filip Sköldberg, Lars Rönnblom,<br>Maria Thornemo, Anders Lindahl,<br>Phillip I. Bird, Fredrik Rorsman,<br>Olle Kämpe, and Eva Landgren   | 951  |
| Antiperoxidase Antibodies Enhance Refolding of Horseradish Peroxidase                                                                                                                                        | D. N. Ermolenko, A. V. Zherdev,<br>B. B. Dzantiev, and V. O. Popov                                                                        | 959  |
| A Three-Residue Signal Confers Localization of a Reporter Protein in the Inner Nuclear Membrane                                                                                                              | Grit Meyer, Dorothee Gicklhorn,<br>Tanja Strive, Klaus Radsak,<br>and Markus Eickmann                                                     | 966  |
| Constitutive TrkA Activity in Receptor-Overexpressing PC12 Clones                                                                                                                                            | Chiara Leoni and Flavia Valtorta                                                                                                          | 972  |
| Evidence for "Pre-recruitment" as a New Mechanism of Transcription Activation in <i>Escherichia coli</i> : The Large Excess of SoxS Binding Sites per Cell Relative to the Number of SoxS Molecules per Cell | Kevin L. Griffith, Ishita M. Shah,<br>Todd E. Myers, Michael C. O'Neill,<br>and Richard E. Wolf, Jr.                                      | 979  |
| A Novel Interaction between Thyroid Hormones and 1,25(OH) $_2$ D $_3$ in Osteoclast Formation                                                                                                                | Masako Miura, Kiyoshi Tanaka,<br>Yasato Komatsu, Michio Suda,<br>Akihiro Yasoda, Yoko Sakuma,<br>Ami Ozasa, and Kazuwa Nakao              | 987  |
| G $\beta\gamma$ Counteracts G $\alpha_q$ Signaling upon $\alpha_1$ -Adrenergic Receptor Stimulation                                                                                                          | Motohiro Nishida, Shuichi Takagahara,<br>Yoshiko Maruyama, Yoshiyuki Sugimoto,<br>Taku Nagao, and Hitoshi Kurose                          | 995  |
| Effect of Resveratrol on Growth of 4T1 Breast Cancer Cells <i>in Vitro</i> and <i>in Vivo</i>                                                                                                                | Kathleen Bove, David W. Lincoln,<br>and Min-Fu Tsan                                                                                       | 1001 |

|                                                                                                                                                                                                           |                                                                                                                                                                             |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Antifungal Mechanism of an Antimicrobial Peptide, HP (2–20), Derived from N-Terminus of <i>Helicobacter pylori</i> Ribosomal Protein L1 against <i>Candida albicans</i>                                   | Dong Gun Lee, Yoonkyung Park, Hee Nam Kim, Hyung Keun Kim, Pyoung Il Kim, Bo Hwa Choi, and Kyung-Soo Hahm                                                                   | 1006 |
| YC-1-Mediated Vascular Protection through Inhibition of Smooth Muscle Cell Proliferation and Platelet Function                                                                                            | David A. Tulis, Kristyn S. Bohl Masters, Elizabeth A. Lipke, Rachel L. Schiesser, Alida J. Evans, Kelly J. Peyton, William Durante, Jennifer L. West, and Andrew I. Schafer | 1014 |
| A Cellular Mechanism That Reversibly Inactivates Pancaspase Inhibitor zAsp-CH <sub>2</sub> -DCB: A Potential Pitfall Causing Discrepancy between <i>in Vitro</i> and <i>in Vivo</i> Caspase Assays        | Kaori Sakurada, Chifumi Kitanaka, Akiko Kokubu, Arata Tomiyama, Jun Sunayama, Takamasa Kayama, and Yoshiyuki Kuchino                                                        | 1022 |
| Proteome Analysis of Hepatocellular Carcinoma                                                                                                                                                             | Seung Oe Lim, Sung-Jun Park, Won Kim, Sung Gyoo Park, Hie-Joon Kim, Yong-Il Kim, Tae-Sung Sohn, Jae-Hyung Noh, and Guhung Jung                                              | 1031 |
| Down-Regulated Expression of Exocytotic Proteins in Pancreatic Islets of Diabetic GK Rats                                                                                                                 | Wei Zhang, Akhtar Khan, Claes-Goran Östenson, Per-Olof Berggren, Suad Efendic, and Björn Meister                                                                            | 1038 |
| Nuclear Factor- $\kappa$ B-Independent Regulation of Lipopolysaccharide-Mediated Interleukin-6 Biosynthesis                                                                                               | John J. Haddad and Christian S. Fahlman                                                                                                                                     | 1045 |
| Biomarkers of Human Skin Cells Identified Using DermArray DNA Arrays and New Bioinformatics Methods                                                                                                       | Ernest V. Curto, Glenna W. Lambert, Richard L. Davis, Teresa W. Wilborn, and Thomas P. Dooley                                                                               | 1052 |
| Macrosphelide B Suppressed Metastasis through Inhibition of Adhesion of sLe <sup>x</sup> /E-Selectin Molecules                                                                                            | Akiko Fukami, Kousuke Iijima, Masahiko Hayashi, Kanki Komiyama, and Satoshi Omura                                                                                           | 1065 |
| NF-IL6 and HSF1 Have Mutually Antagonistic Effects on Transcription in Monocytic Cells                                                                                                                    | Yue Xie, Changmin Chen, Mary Ann Stevenson, David A. Hume, Philip E. Auron, and Stuart K. Calderwood                                                                        | 1071 |
| Glucose-Stimulated Insulin Secretion Does Not Require Activation of Pyruvate Dehydrogenase: Impact of Adenovirus-Mediated Overexpression of PDH Kinase and PDH Phosphate Phosphatase in Pancreatic Islets | Linda I. Nicholls, Edward K. Ainscow, and Guy A. Rutter                                                                                                                     | 1081 |
| Reduction of Toxic Metabolite Formation of Acetaminophen                                                                                                                                                  | Eszter Hazai, László Vereczkey, and Katalin Monostory                                                                                                                       | 1089 |
| Modulation of Sodium Current in Mammalian Cells by an Epilepsy-Related $\beta$ 1-Subunit Mutation                                                                                                         | Paolo Tammaro, Franco Conti, and Oscar Moran                                                                                                                                | 1095 |
| Peptide Probe Study of the Critical Regulatory Domain of the Cardiac Ryanodine Receptor                                                                                                                   | Takeshi Yamamoto and Noriaki Ikemoto                                                                                                                                        | 1102 |



Dilinoleoylphosphatidylcholine Is  
Responsible for the Beneficial Effects of  
Polyenylphosphatidylcholine on  
Ethanol-Induced Mitochondrial Injury in Rats

**Khursheed P. Navder and Charles S. Lieber 1109**

**Number 5, March 15, 2002**

**BREAKTHROUGHS AND VIEWS**

$\beta$ -1,4-Galactosyltransferase and Lactose  
Synthase: Molecular Mechanical Devices

**Boopathy Ramakrishnan,  
Elizabeth Boeggeman,  
and Pradman K. Qasba 1113**

**REGULAR ARTICLES**

Analysis of the Role of RecQ Helicases in RNAi  
in Mammals

**Paula Stein, Petr Svoboda,  
Deborah J. Stumpo, Perry J. Blackshear,  
David B. Lombard, Brad Johnson,  
and Richard M. Schultz 1119**

Osmotic Resistance of High-Density  
Erythrocytes in Transglutaminase 2-Deficient  
Mice

**Francesca Bernassola, Giovanna Boumis,  
Marco Corazzari, Giuseppe Bertini,  
Gennaro Citro, Richard A. Knight,  
Gino Amiconi, and Gerry Melino 1123**

Ubiquinone Biosynthesis in Rat Liver  
Peroxisomes

**Michael Tekle, Magnus Bentinger,  
Tomas Nordman, Eeva-Liisa Appelkvist,  
Tadeusz Chojnacki, and Jerker M. Olsson 1128**

Alternative Splicing Modulates Subcellular  
Localization of Laforin

**Subramaniam Ganesh, Toshimitsu Suzuki,  
and Kazuhiro Yamakawa 1134**

Transcriptional Regulation of the Human  
Tumor Suppressor p14<sup>ARF</sup> by E2F1, E2F2,  
E2F3, and Sp1-like Factors

**Tiziana Parisi, Alessandra Pollice,  
Antonio Di Cristofano, Viola Calabrò,  
and Girolama La Mantia 1138**

Nuclear Receptor and Apoptosis Initiator  
NGFI-B Is a Substrate for Kinase ERK2

**Hege H. Slagsvold, Anne-Carine Østvold,  
Åsa B. Fallgren, and Ragnhild E. Paulsen 1146**

A Novel Negative Regulatory Element in the  
Human Collagenase-3 Proximal Promoter  
Region

**Mohamed Benderdour, Ginette Tardif,  
Jean-Pierre Pelletier, Martine Dupuis,  
Changshan Geng,  
and Johanne Martel-Pelletier 1151**

Genomic Organization and Regulation of a  
Human 7-Helix Transmembrane Receptor  
Which Is Expressed in Pulmonary Epithelial  
Cells and Induced in Hypoxia

**Jörg Hänze, David A. Groneberg,  
Frank Rose, Anika Hanisch, Jörg Dötsch,  
Christian Peiser, Werner Seeger,  
Wolfgang Rascher, Axel Fischer,  
and Friedrich Grimminger 1160**

ALG-2 Interacts with the Amino-Terminal  
Domain of Annexin XI in a Ca<sup>2+</sup>-Dependent  
Manner

**Hirokazu Satoh, Hideki Shibata,  
Yoshimi Nakano, Yasuyuki Kitaura,  
and Masatoshi Maki 1166**

|                                                                                                                                                                  |                                                                                                                                                                |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Expression of Normal and Mutant GFP-Tagged $\gamma^+$ L Amino Acid Transporter-1 in Mammalian Cells                                                              | Minna Toivonen, Juha Mykkänen, Pertti Aula, Olli Simell, Marja-Liisa Savontaus, and Kirsi Huoponen                                                             | 1173 |
| Two Splice Variants of Human <i>PEX19</i> Exhibit Distinct Functions in Peroxisomal Assembly                                                                     | Peter U. Mayerhofer, Tanja Kattenfeld, Adelbert A. Roscher, and Ania C. Muntau                                                                                 | 1180 |
| Isolation and Characterization of a GnRH-like Peptide from <i>Octopus vulgaris</i>                                                                               | Eiko Iwakoshi, Kyoko Takuwa-Kuroda, Yuko Fujisawa, Miki Hisada, Kazuyoshi Ukena, Kazuyoshi Tsutsui, and Hiroyuki Minakata                                      | 1187 |
| Dioxin-Induced Adseverin Expression in the Mouse Thymus Is Strictly Regulated and Dependent on the Aryl Hydrocarbon Receptor                                     | Camilla Svensson, Allen E. Silverstone, Zhi-Wei Lai, and Katarina Lundberg                                                                                     | 1194 |
| Effects of a $\beta$ 3-Adrenergic Agonist on Glucose Uptake and Leptin Expression and Secretion in Cultured Adipocytes from Lean and Overweight (Cafeteria) Rats | María J. Moreno-Aliaga, Oscar Lamas, Amelia Marti, and J. Alfredo Martínez                                                                                     | 1201 |
| The Effects of Centrally Administered Apelin-13 on Food Intake, Water Intake and Pituitary Hormone Release in Rats                                               | Shahrad Taheri, Kevin Murphy, Mark Cohen, Elizabeth Sujkovic, Adam Kennedy, Waljit Dhillon, Catherine Dakin, Arshia Sajedi, Mohammad Ghatei, and Stephen Bloom | 1208 |
| A Bisubstrate Analog Inhibitor of the Carboxyltransferase Component of Acetyl-CoA Carboxylase                                                                    | Keith L. Levert and Grover L. Waldrop                                                                                                                          | 1213 |
| Resveratrol Activates Membrane-Bound Guanylyl Cyclase in Coronary Arterial Smooth Muscle: A Novel Signaling Mechanism in Support of Coronary Protection          | Abdalla M. El-Mowafy                                                                                                                                           | 1218 |
| Relationship between the Self-Splicing Activity and the Solidity of the Master Domain of the <i>Tetrahymena</i> Group I Ribozyme                                 | Yoshihiko Oe, Yoshiya Ikawa, Hideaki Shiraishi, and Tan Inoue                                                                                                  | 1225 |
| ATP Dependence of the SNARE/Caveolin 1 Interaction in the Hippocampus                                                                                            | Johanna M. Magga, Jason G. Kay, Alice Davy, Nadine P. Poulton, Stephen M. Robbins, and Janice E. A. Braun                                                      | 1232 |
| Leucine Zipper Domain of HIV-1 gp41 Interacted Specifically with $\alpha$ -Catenin                                                                               | Jong Tae Kim, Eun Mi Kim, Kyoung Hoa Lee, Ji-Eun Choi, Byung H. Jhun, and Jung Woo Kim                                                                         | 1239 |
| Nucleotide-Induced Conformational Changes of PMP70, an ATP Binding Cassette Transporter on Rat Liver Peroxisomal Membranes                                       | Yoshinori Kashiwayama, Masashi Morita, Keiju Kamijo, and Tsuneo Imanaka                                                                                        | 1245 |
| Major Adenine Products from 2-Methyl-1,4-naphthoquinone-Sensitized Photoirradiation at 365 nm                                                                    | Yinsheng Wang, Zhenjiu Liu, and Cynthia Dixon                                                                                                                  | 1252 |
| Bcl-X <sub>L</sub> and Calyculin A Prevent Translocation of Bax to Mitochondria during Apoptosis                                                                 | Neema Ganju and Alan Eastman                                                                                                                                   | 1258 |



|                                                                                                                  |                                                                                                                                                                                                                          |      |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Potassium Channel mRNAs with AU-Rich Elements and Brain-Specific Expression                                      | Shiro Suda, Masashi Nibuya, Haruhiko Suda, Ken Takamatsu, Toru Miyazaki, Soichiro Nomura, and Nobufumi Kawai                                                                                                             | 1265 |
| High-Order Photobleaching of Green Fluorescent Protein inside Live Cells in Two-Photon Excitation Microscopy     | Tong-Sheng Chen, Shao-Qun Zeng, Qing-Ming Luo, Zhi-Hong Zhang, and Wei Zhou                                                                                                                                              | 1272 |
| Probing the Binding States of GDP to Cdc42 Using Urea Interaction                                                | Ju Zhao, Yuan Cheng, Zhixin Wang, and Jinfeng Wang                                                                                                                                                                       | 1276 |
| Deficiency of $\alpha$ -Dystroglycan in Muscle-Eye-Brain Disease                                                 | Hiroki Kano, Kazuhiro Kobayashi, Ralf Herrmann, Masaji Tachikawa, Hiroshi Manya, Ichizo Nishino, Ikuya Nonaka, Volker Straub, Beril Talim, Thomas Voit, Haluk Topaloglu, Tamao Endo, Hideki Yoshikawa, and Tatsushi Toda | 1283 |
| Inactivation of $I_A$ Channels of Frog Skeletal Muscle Is Modulated by ATP                                       | Javier Camacho and Jorge A. Sánchez                                                                                                                                                                                      | 1287 |
| Identification of the Alternative Splice Products Encoded by the Human Protein Phosphatase Inhibitor-1 Gene      | Hsin-tzu Liu, Ta-hsien Lin, Hann-chorng Kuo, Yi-chen Chen, Huey-Jen Tsay, Hao-Hsuan Jeng, Pai-Chi Tsai, Fu-kai Shie, Ji-hsiung Chen, and Hsien-bin Huang                                                                 | 1293 |
| Solution Structure of Intracellular Signal-Transducing Peptide Derived from Human $\beta_2$ -Adrenergic Receptor | Ayumu Okuda, Osamu Matsumoto, Masako Akaji, Tooru Taga, Tadayasu Ohkubo, and Yuji Kobayashi                                                                                                                              | 1297 |
| Metformin Effects on Dipeptidylpeptidase IV Degradation of Glucagon-like Peptide-1                               | Simon A. Hinke, Kerstin Kühn-Wache, Torsten Hoffmann, Raymond A. Pederson, Christopher H. S. McIntosh, and Hans-Ulrich Demuth                                                                                            | 1302 |
| Author Index for Volume 291                                                                                      |                                                                                                                                                                                                                          | 1309 |

**Volume 292, Number 1, March 22, 2002**

**BREAKTHROUGHS AND VIEWS**

- |                                       |                                                        |          |
|---------------------------------------|--------------------------------------------------------|----------|
| Bone Tissue Engineering: Hope vs Hype | <b>Felicity R. A. J. Rose and Richard O. C. Oreffo</b> | <b>1</b> |
|---------------------------------------|--------------------------------------------------------|----------|

**REGULAR ARTICLES**

- |                                                                                                                                |                                                                                                                                                                |           |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Nuclear Translocation of SHP and Visualization of Interaction with HNF-4 $\alpha$ in Living Cells                              | <b>Makiko Ogata, Takeo Awaji, Naoko Iwasaki, Shunichi Miyazaki, Graeme I. Bell, and Yasuhiko Iwamoto</b>                                                       | <b>8</b>  |
| Localization of PTP-FERM in Nerve Processes through Its FERM Domain                                                            | <b>Yohzo Uchida, Masato Ogata, Yoshiko Mori, Masatsugu Oh-hora, Naoya Hatano, and Toshiyuki Hamaoka</b>                                                        | <b>13</b> |
| Immortalized Suprachiasmatic Nucleus Cells Express Components of Multiple Circadian Regulatory Pathways                        | <b>William J. Hurst, David Earnest, and Martha U. Gillette</b>                                                                                                 | <b>20</b> |
| Molecular Aptamer Beacons for Real-Time Protein Recognition                                                                    | <b>Jianwei J. Li, Xiaohong Fang, and Weihong Tan</b>                                                                                                           | <b>31</b> |
| TNF Receptor 1, IL-1 Receptor, and iNOS Genetic Knockout Mice Are Not Protected from Anthrax Infection                         | <b>John Kalns, Julie Scruggs, Nancy Millenbaugh, Jeeva Vivekananda, David Shealy, Jeffrey Eggers, and Johnathan Kiel</b>                                       | <b>41</b> |
| Thioredoxin Reductase Reduces Lipid Hydroperoxides and Spares $\alpha$ -Tocopherol                                             | <b>James M. May, Jason D. Morrow, and Raymond F. Burk</b>                                                                                                      | <b>45</b> |
| Chemical Induction of Cellular Antioxidants Affords Marked Protection against Oxidative Injury in Vascular Smooth Muscle Cells | <b>Zhuoxiao Cao and Yunbo Li</b>                                                                                                                               | <b>50</b> |
| A Double RING-H2 Domain in <i>RNF32</i> , a Gene Expressed during Sperm Formation                                              | <b>Marijke J. van Baren, Herma C. van der Linde, Guido J. Breedveld, Willy M. Baarends, Patrizia Rizzu, Esther de Graaff, Ben A. Oostra, and Peter Heutink</b> | <b>58</b> |
| Active Site Mutations of Recombinant Deacetoxycephalosporin C Synthase                                                         | <b>Hwei-Jen Lee, Christopher J. Schofield, and Matthew D. Lloyd</b>                                                                                            | <b>66</b> |
| Sp1 and Sp3 Activate the Rat Connexin40 Proximal Promoter                                                                      | <b>Birgit E. J. Teunissen, Shirley C. M. van Amersfoort, Tobias Opthof, Habo J. Jongsma, and Marti F. A. Bierhuizen</b>                                        | <b>71</b> |
| Vascular Endothelial Growth Factor Induces IP-10 Chemokine Expression                                                          | <b>Ching-Shwun Lin, Guiting Lin, Kuo-Chiang Chen, Hao-Chung Ho, and Tom F. Lue</b>                                                                             | <b>79</b> |



|                                                                                                                                                |                                                                                                                                                                                               |     |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Apolipoprotein E Activates Akt Pathway in Neuro-2a in an Isoform-Specific Manner                                                               | Isabelle Laffont, Motoko Takahashi, Yukinao Shibukawa, Koichi Honke, Vladimir V. Shuvaev, Gérard Siest, Sophie Visvikis, and Naoyuki Taniguchi                                                | 83  |
| Human Alkaline Phosphatase Expression and Secretion into Chicken Eggs after <i>in Vivo</i> Gene Electroporation in the Oviduct of Laying Hens  | Hiroshi Takami, Hisako Watanabe, Yasushige Ohmori, Hyi-Man Park, and Tatsuo Muramatsu                                                                                                         | 88  |
| Fenton Reaction Is Primarily Involved in a Mechanism of (-)-Epigallocatechin-3-gallate to Induce Osteoclastic Cell Death                       | Hiroshi Nakagawa, Masaaki Wachi, Je-Tae Woo, Masanori Kato, Shinya Kasai, Fuminori Takahashi, In-Seon Lee, and Kazuo Nagai                                                                    | 94  |
| Analysis of Epitopes on Endometrial Epithelium by Scanning Immunoelectron Microscopy                                                           | Andrew W. Horne, John O. White, El-Nasir Lalani, Margaret A. Mobberley, Raul A. Margara, Geoffrey H. Trew, and Timothy A. Ryder                                                               | 102 |
| A Novel Aberrant Splicing Mutation of the PEX16 Gene in Two Patients with Zellweger Syndrome                                                   | Nobuyuki Shimozaawa, Tomoko Nagase, Yasuhiko Takemoto, Yasuyuki Suzuki, Yukio Fujiki, Ronald J. A. Wanders, and Naomi Kondo                                                                   | 109 |
| Mouse ARF-Related Protein 1: Genomic Organization and Analysis of Its Promoter                                                                 | A. G. Mueller, H. G. Joost, and A. Schürmann                                                                                                                                                  | 113 |
| Clast5/Stra13 Is a Negative Regulator of B Lymphocyte Activation                                                                               | Mika Seimiya, Rumana Bahar, Yanqing Wang, Kiyoko Kawamura, Yuji Tada, Seiji Okada, Masahiko Hatano, Takeshi Tokuhisa, Hiromitsu Saisho, Takeshi Watanabe, Masatoshi Tagawa, and Jiyang O-Wang | 121 |
| Phosphatase and Oxygen Radical-Generating Activities of Mammalian Purple Acid Phosphatase Are Functionally Independent                         | Helena Kaija, Sari L. Alatalo, Jussi M. Halleen, Ylva Lindqvist, Gunter Schneider, H. Kalervo Väänänen, and Pirkko Vihko                                                                      | 128 |
| <i>In Vitro</i> Autoradiographic Localization of <sup>125</sup> I-Secretin Receptor Binding Sites in Rat Brain                                 | Satoshi Nozaki, Rika Nakata, Hiroshi Mizuma, Nobuhiro Nishimura, Yumiko Watanabe, Ryuichiro Kohashi, and Yasuyoshi Watanabe                                                                   | 133 |
| Transgenic Expression of FGF8 and FGF10 Induces Transdifferentiation of Pancreatic Islet Cells into Hepatocytes and Exocrine Cells             | Takashi Yamaoka, Kenji Yoshino, Taketo Yamada, Makiko Yano, Takefumi Matsui, Takashi Yamaguchi, Maki Moritani, Jun-ichi Hata, Sumihare Noji, and Mitsuo Itakura                               | 138 |
| Adenoviral BMP-2 Gene Transfer in Mesenchymal Stem Cells: <i>In Vitro</i> and <i>in Vivo</i> Bone Formation on Biodegradable Polymer Scaffolds | Kris Partridge, Xuebin Yang, Nicholas M. P. Clarke, Yasunori Okubo, Kazuhisa Bessho, Walter Sebald, Steven M. Howdle, Kevin M. Shakesheff, and Richard O. C. Oreffo                           | 144 |

|                                                                                                                                             |                                                                                                                                                                              |            |
|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Membrane Topogenesis of the Three Amino-Terminal Transmembrane Segments of Glucose-6-phosphatase on Endoplasmic Reticulum                   | <b>Koutarou Ukaji, Naoko Ariyoshi, Masao Sakaguchi, Naotaka Hamasaki, and Katsuyoshi Mihara</b>                                                                              | <b>153</b> |
| Gelatinase Levels in Male and Female Breast Cancer                                                                                          | <b>Gianluigi Giannelli, Emilia Fransvea, Felice Marinosci, Carlo Bergamini, Antonella Daniele, Silvia Colucci, Angelo Paradiso, Michele Quaranta, and Salvatore Antonaci</b> | <b>161</b> |
| Extracellular pH Modulates <i>Helicobacter pylori</i> -Induced Vacuolation and VacA Toxin Internalization in Human Gastric Epithelial Cells | <b>Vittorio Ricci, Patrizia Sommi, Roberto Fiocca, Vittorio Necchi, Marco Romano, and Enrico Solcia</b>                                                                      | <b>167</b> |
| Smoking Has No Effect on the Amino Acid Composition of Apolipoprotein B100 of LDL While Directly Influencing the Antioxidant Status         | <b>Ananth Sekher Pannala, K. Richard Bruckdorfer, and Catherine A. Rice-Evans</b>                                                                                            | <b>175</b> |
| IL-2-Mediated Upregulation of uPA and uPAR in Natural Killer Cells                                                                          | <b>Gheath Al-Atrash, Sreerama Shetty, Steven Idell, Yaming Xue, Richard P. Kitson, Prathap Kumar Shetty Halady, and Ronald H. Goldfarb</b>                                   | <b>184</b> |
| Digoxin Up-Regulates MDR1 in Human Colon Carcinoma Caco-2 Cells                                                                             | <b>Kohji Takara, Masayuki Tsujimoto, Noriaki Ohnishi, and Teruyoshi Yokoyama</b>                                                                                             | <b>190</b> |
| Subcellular Localization of $\beta$ -Catenin Is Regulated by Cell Density                                                                   | <b>Cornelia Dietrich, Julia Scherwat, Dagmar Faust, and Franz Oesch</b>                                                                                                      | <b>195</b> |
| Activator Protein-1 Complex Expressed by Magnetism in Cultured Rat Hippocampal Neurons                                                      | <b>Takao Hirai, Noritaka Nakamichi, and Yukio Yoneda</b>                                                                                                                     | <b>200</b> |
| Tefluthrin Modulates a Novel Anionic Background Conductance ( $I_{AB}$ ) in Guinea-Pig Ventricular Myocytes                                 | <b>John J. Borg, Jules C. Hancox, C. Ian Spencer, and Roland Z. Kozlowski</b>                                                                                                | <b>208</b> |
| Pulmonary Inflammation Monitored Noninvasively by MRI in Freely Breathing Rats                                                              | <b>Bruno Tigani, Elisabeth Schaeublin, Rosemary Sugar, Alan D. Jackson, John R. Fozard, and Nicolau Beckmann</b>                                                             | <b>216</b> |
| Minimal Heparin/Heparan Sulfate Sequences for Binding to Fibroblast Growth Factor-1                                                         | <b>Marco Guerrini, Teresa Agulles, Antonella Bisio, Miloš Hricovini, Luigi Lay, Annamaria Naggi, Laura Poletti, Luisella Sturiale, Giangiacomo Torri, and Benito Casu</b>    | <b>222</b> |
| Novel, Not Adenylyl Cyclase-Coupled Cannabinoid Binding Site in Cerebellum of Mice                                                          | <b>Krisztina Monory, Eleni Th. Tzavara, Jinette Lexime, Catherine Ledent, Marc Parmentier, Anna Borsodi, and Jacques Hanoune</b>                                             | <b>231</b> |
| Temporal Generation of Multiple Antifungal Proteins in Primed Seeds                                                                         | <b>Xing Wang, Richard S. Thoma, James A. Carroll, and Kevin L. Duffin</b>                                                                                                    | <b>236</b> |



|                                                                                                                   |                                                                                                                                                                                                                                 |     |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Multiple Liver-Specific Factors Bind to a 64-bp Element and Activate Apo(a) Gene                                  | Vikas Handa, Mahboob-ul-hussain, Nirupma Pati, and Uttam Pati                                                                                                                                                                   | 243 |
| Localization of a Negative Vitamin D Response Sequence in the Human Growth Hormone Gene                           | Samuel Seoane, Manuela Alonso, Carmen Segura, and Román Pérez-Fernández                                                                                                                                                         | 250 |
| Murine Apg12p Has a Substrate Preference for Murine Apg7p over Three Apg8p Homologs                               | Isei Tanida, Emiko Tanida-Miyake, Tomohito Nishitani, Masaaki Komatsu, Harumi Yamazaki, Takashi Ueno, and Eiki Kominami                                                                                                         | 256 |
| An Experimental Validation of Orphan Genes of <i>Buchnera</i> , a Symbiont of Aphids                              | Sayaka Shimomura, Shuji Shigenobu, Mizue Morioka, and Hajime Ishikawa                                                                                                                                                           | 263 |
| Nucleosome Linker Proteins HMGB1 and Histone H1 Differentially Enhance DNA Ligation Reactions                     | Shiho Yamanaka, Eisaku Katayama, Ken-ichi Yoshioka, Sumiko Nagaki, Michiteru Yoshida, and Hirobumi Teraoka                                                                                                                      | 268 |
| Retinoic Acid-Inducible Gene-I Is Induced in Endothelial Cells by LPS and Regulates Expression of COX-2           | Tadaatsu Imaizumi, Satoko Aratani, Toshihiro Nakajima, Mary Carlson, Tomoh Matsumiya, Kunikazu Tanji, Keizou Ookawa, Hidemi Yoshida, Shigeki Tsuchida, Thomas M. McIntyre, Stephen M. Prescott, Guy A. Zimmerman, and Kei Satoh | 274 |
| A Novel Five-Subunit-Type 2-Oxoglutarate:Ferredoxin Oxidoreductases from <i>Hydrogenobacter thermophilus</i> TK-6 | Na-Rae Yun, Masahiro Yamamoto, Hiroyuki Arai, Masaharu Ishii, and Yasuo Igarashi                                                                                                                                                | 280 |
| IL-6 Induces Expression of the <i>Fli-1</i> Proto-oncogene via STAT3                                              | David R. Hodge, Dapei Li, Sheng Mei Qi, and William L. Farrar                                                                                                                                                                   | 287 |

## ERRATUM

|                                                                                                                                                                                                                                                                    |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Volume 290, Number 1 (2002), in the article "Measuring $\beta$ -Galactosidase Activity in Bacteria: Cell Growth, Permeabilization, and Enzyme Assays in 96-Well Arrays," by Kevin L. Griffith and Richard E. Wolf, Jr., pages 397–402 (doi:10.1006/bbrc.2001.6152) | 292 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

## Number 2, March 29, 2002

## BREAKTHROUGHS AND VIEWS

|                                       |                                                 |     |
|---------------------------------------|-------------------------------------------------|-----|
| The Involvement of Molybdenum in Life | R. J. P. Williams and J. J. R. Fraústo da Silva | 293 |
|---------------------------------------|-------------------------------------------------|-----|

## REGULAR ARTICLES

|                                                |                                                          |     |
|------------------------------------------------|----------------------------------------------------------|-----|
| DOC-2/DAB2 Is the Binding Partner of Myosin VI | Akira Inoue, Osamu Sato, Kazuaki Homma, and Mitsuo Ikebe | 300 |
|------------------------------------------------|----------------------------------------------------------|-----|

|                                                                                                                                                       |                                                                                                                                                                                              |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Glucose Transport by Osmotic Shock and Vanadate Is Impaired by Glucosamine                                                                            | Emma Heart and Chin K. Sung                                                                                                                                                                  | 308 |
| Phenobarbitone-Mediated Translocation of the Cytosolic Proteins Interacting with the 5'-Proximal Region of Rat Liver CYP2B1/B2 Gene into the Nucleus  | Kalpana R. Samudre, S. A. Mani, P. G. Vathsala, P. N. Rangarajan, and G. Padmanaban                                                                                                          | 312 |
| Motor Discoordination in Mutant Mice Lacking Junctophilin Type 3                                                                                      | Miyuki Nishi, Kouichi Hashimoto, Koji Kuriyama, Shinji Komazaki, Masanobu Kano, Shigenobu Shibata, and Hiroshi Takeshima                                                                     | 318 |
| Phospholipase D Regulates Calcium Oscillation Frequency and Nuclear Factor- $\kappa$ B Activity in Histamine-Stimulated Human Endothelial Cells       | Qinghua Hu, Viswanathan Natarajan, and Roy C. Ziegelstein                                                                                                                                    | 325 |
| A Role for the Common GTP-Binding Protein in Coupling of Chromosome Replication to Cell Growth and Cell Division                                      | Aleksandra Sikora-Borgula, Monika Słomińska, Piotr Trzonkowski, Ryszard Zielke, Andrzej Myśliwski, Grzegorz Węgrzyn, and Agata Czyż                                                          | 333 |
| Molecular Basis of the Voltage-Dependent Gating of TREK-1, a Mechano-Sensitive K <sup>+</sup> Channel                                                 | François Maingret, Eric Honoré, Michel Lazdunski, and Amanda Jane Patel                                                                                                                      | 339 |
| Caspase-8 Gene Transduction Augments Radiation-Induced Apoptosis in DLD-1 Cells                                                                       | Hiroaki Uchida, Nobusada Shinoura, Joji Kitayama, Toshiaki Watanabe, Hirokazu Nagawa, and Hirofumi Hamada                                                                                    | 347 |
| Exposure to Power Frequency Magnetic Fields Suppresses X-Ray-Induced Apoptosis Transiently in Ku80-Deficient xrs5 Cells                               | Furong Tian, Takehisa Nakahara, Masami Yoshida, Naoko Honda, Hideki Hirose, and Junji Miyakoshi                                                                                              | 355 |
| Role of the Conserved DRY Motif on G Protein Activation of Rat Angiotensin II Receptor Type 1A                                                        | Kenji Ohyama, Yoshiaki Yamano, Tomoaki Sano, Yoshiko Nakagomi, Manabu Wada, and Tadashi Inagami                                                                                              | 362 |
| Identification of 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin-Responsive Genes in Mouse Liver by Serial Analysis of Gene Expression                  | Makoto Kurachi, Shin-ichi Hashimoto, Aya Obata, Shigenori Nagai, Tomoyuki Nagahata, Hidekuni Inadera, Hideko Sone, Chiharu Tohyama, Shuichi Kaneko, Ken-ichi Kobayashi, and Kouji Matsushima | 368 |
| Identification and Characterization of Soluble Isoform of Fibroblast Growth Factor Receptor 3 in Human SaOS-2 Osteosarcoma Cells                      | Ju-Hyeog Jang                                                                                                                                                                                | 378 |
| Attenuation of Transforming Growth Factor $\beta$ -Induced Growth Inhibition in Human Hepatocellular Carcinoma Cell Lines by Cyclin D1 Overexpression | Hyun-Soon Jong, Ho Soon Lee, Tae You Kim, Young-Hyuck Im, Jae-Won Park, Noe Kyeong Kim, and Yung-Jue Bang                                                                                    | 383 |
| Biliary Anionic Peptide Fraction and ApoA-I Regulate Intestinal Cholesterol Uptake                                                                    | Dominique Jourdeuil-Rahmani, Monique Charbonnier, Nicole Domingo, François Luccioni, Huguette Lafont, and Denis Lairon                                                                       | 390 |



|                                                                                                                                                               |                                                                                                                                                                                             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| The Function of OmpA in <i>Escherichia coli</i>                                                                                                               | <b>Ying Wang</b>                                                                                                                                                                            | <b>396</b> |
| Catecholestrogen Sulfation: Possible Role in Carcinogenesis                                                                                                   | <b>Araba A. Adjei<br/>and Richard M. Weinshilboum</b>                                                                                                                                       | <b>402</b> |
| Exercise-Induced Transcription of the Muscle Glucose Transporter (GLUT 4) Gene                                                                                | <b>Paul S. MacLean, Donghai Zheng,<br/>Jared P. Jones, Ann Louise Olson,<br/>and G. Lynis Dohm</b>                                                                                          | <b>409</b> |
| Revised Structure of the Active Form of Human Deoxyribonuclease II $\alpha$                                                                                   | <b>Kyle S. MacLea, Ronald J. Krieser,<br/>and Alan Eastman</b>                                                                                                                              | <b>415</b> |
| Promoter Analysis of Tumor Suppressor Gene PTEN: Identification of Minimum Promoter Region                                                                    | <b>Xiaoyang Sheng, Dimpy Koul,<br/>Juinn-Lin Liu, Ta-Jen Liu,<br/>and W. K. Alfred Yung</b>                                                                                                 | <b>422</b> |
| Dominant-Negative HMGA1 Blocks $\mu$ Enhancer Activation through a Novel Mechanism                                                                            | <b>Amy Andreucci, Raymond Reeves,<br/>Kevin M. McCarthy,<br/>and Barbara S. Nikolajczyk</b>                                                                                                 | <b>427</b> |
| Spontaneous Nicking in the Nontoxic-Nonhemagglutinin Component of the <i>Clostridium botulinum</i> Toxin Complex                                              | <b>Yoshimasa Sagane, Toshihiro Watanabe,<br/>Hirokazu Kouguchi, Hiroyuki Sunagawa,<br/>Shigehiro Obata, Keiji Oguma,<br/>and Tohru Ohyama</b>                                               | <b>434</b> |
| Production of Antiviral and Antitumor Proteins MAP30 and GAP31 in Cucurbits Using the Plant Virus Vector ZYMV-AGII                                            | <b>Tzahi Arazi, Paul Lee Huang,<br/>Philip Lin Huang, Li Zhang,<br/>Yoel Moshe Shibolet, Amit Gal-On,<br/>and Sylvia Lee-Huang</b>                                                          | <b>441</b> |
| Role of CD4 Hinge Region in GP120 Utilization by Immunoglobulin Domain 1                                                                                      | <b>James L. Murray, Qin-xue Hu,<br/>Jean-Marc Navenot, and Stephen C. Peiper</b>                                                                                                            | <b>449</b> |
| Bisphenol A Induces Apoptosis and G2-to-M Arrest of Ovarian Granulosa Cells                                                                                   | <b>Jiping Xu, Yutaka Osuga, Tetsu Yano,<br/>Yutaka Morita, Xiaohui Tang,<br/>Toshihiro Fujiwara, Yasushi Takai,<br/>Hirotaka Matsumi, Kaori Koga,<br/>Yuji Taketani, and Osamu Tsutsumi</b> | <b>456</b> |
| Purification and Characterization of Two Active Derivatives of Recombinant YpIA, a Secreted Phospholipase from <i>Yersinia enterocolitica</i>                 | <b>Safet O. Hatic II, Wendy L. Picking,<br/>Briana M. Young, Glenn M. Young,<br/>and William D. Picking</b>                                                                                 | <b>463</b> |
| The Mechanism of Salivary Amylase Hydrolysis: Role of Residues at Subsite S2'                                                                                 | <b>Prasunkumar J. Mishra,<br/>Chandran Ragunath,<br/>and Narayanan Ramasubbu</b>                                                                                                            | <b>468</b> |
| Inhibited Activities in CCAAT/Enhancer-Binding Protein, Activating Protein-1 and Cyclins after Hepatectomy in Rats with Thioacetamide-Induced Liver Cirrhosis | <b>Gang Zhao, Kenji Nakano, Kazuo Chijiwa,<br/>Junji Ueda, and Masao Tanaka</b>                                                                                                             | <b>474</b> |
| Effects of Aging on Growth Factors Gene and Protein Expression in the Dorsal and Ventral Lobes of Rat Prostate                                                | <b>Hong Zhao, Aditi Patra, Che-Chung Yeh,<br/>Yuichiro Tanaka, Bong R. Oh,<br/>and Rajvir Dahiya</b>                                                                                        | <b>482</b> |

|                                                                                                                                                                                 |                                                                                                                                                                                                                                                                |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Identification of a Defect in the UGT1A1 Gene Promoter and Its Association with Hyperbilirubinemia                                                                              | Junko Sugatani, Kasumi Yamakawa, Kouich Yoshinari, Takashi Machida, Hitoshi Takagi, Masatomo Mori, Satoru Kakizaki, Tatsuya Sueyoshi, Masahiko Negishi, and Masao Miwa                                                                                         | 492 |
| Expression Profile Analysis of Colon Cancer Cells in Response to Sulindac or Aspirin                                                                                            | Masayoshi Iizaka, Yoichi Furukawa, Tatsuhiko Tsunoda, Hirofumi Akashi, Michio Ogawa, and Yusuke Nakamura                                                                                                                                                       | 498 |
| Secondary-Site Mutation Restores the Transport Defect Caused by the Transmembrane Domain Mutation of the Xenobiotic Transporter MexB in <i>Pseudomonas aeruginosa</i>           | Hiroshi Yoneyama, Hideaki Maseda, Taka-aki Yamabayashi, Shotaro Izumi, and Taiji Nakae                                                                                                                                                                         | 513 |
| Mechanistic Studies on AMD6221: A Ruthenium-Based Nitric Oxide Scavenger                                                                                                        | R. Mosi, B. Seguin, B. Cameron, L. Amankwa, M. C. Darkes, and S. P. Fricker                                                                                                                                                                                    | 519 |
| <i>Saccharomyces cerevisiae</i> Resistance to Chlorinated Phenoxyacetic Acid Herbicides Involves Pdr1p-Mediated Transcriptional Activation of <i>TPO1</i> and <i>PDR5</i> Genes | Miguel Cacho Teixeira and Isabel Sá-Correia                                                                                                                                                                                                                    | 530 |
| TNF $\alpha$ Production in Whole Blood Cultures from Healthy Individuals                                                                                                        | Miriam Ojeda Ojeda, Carmen Valenzuela Silva, Manuel de J. Araña Rosáinz, and Celia Fernández-Ortega                                                                                                                                                            | 538 |
| Cellular Defense against UVB-Induced Phototoxicity by Cytosolic NADP <sup>+</sup> -Dependent Isocitrate Dehydrogenase                                                           | Seung-Hee Jo, So-Hyun Lee, Hang Suk Chun, Su Min Lee, Ho-Jin Koh, Sung-Eun Lee, Jang-Soo Chun, Jeen-Woo Park, and Tae-Lin Huh                                                                                                                                  | 542 |
| Annexin-V Binds to the Intracellular Part of the $\beta_5$ Integrin Receptor Subunit                                                                                            | Mikkel H. Andersen, Lars Berglund, Torben E. Petersen, and Jan T. Rasmussen                                                                                                                                                                                    | 550 |
| The <i>FMO2</i> Gene of Laboratory Rats, as in Most Humans, Encodes a Truncated Protein                                                                                         | Virginie Lattard, Christiane Longin-Sauvageon, Sharon K. Krueger, David E. Williams, and Etienne Benoit                                                                                                                                                        | 558 |
| Early Developing Embryos Affect the Gene Expression Patterns in the Mouse Oviduct                                                                                               | Kai-Fai Lee, Yuan-Qing Yao, Ka-Leung Kwok, Jia-Sen Xu, and William S. B. Yeung                                                                                                                                                                                 | 564 |
| Generation of Amyloid $\beta$ Protein from a Presenilin-1 and $\beta$ APP Complex                                                                                               | Masami Shizuka-Ikeda, Etsuro Matsubara, Masaki Ikeda, Mitsuyasu Kanai, Yasushi Tomidokoro, Yoshio Ikeda, Mitsunori Watanabe, Takeshi Kawarabayashi, Yasuo Harigaya, Koichi Okamoto, Kei Maruyama, Eduardo M. Castaño, Peter St. George-Hyslop, and Mikio Shoji | 571 |
| Melittin-GM1 Interaction: A Model for a Side-by-Side Complex                                                                                                                    | Chiradip Chatterjee and Chaitali Mukhopadhyay                                                                                                                                                                                                                  | 579 |



Number 3, April 5, 2002

**BREAKTHROUGHS AND VIEWS**

- |                                                                                            |                                                                                |     |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----|
| The SELDI-TOF MS Approach to Proteomics:<br>Protein Profiling and Biomarker Identification | Haleem J. Issaq, Timothy D. Veenstra,<br>Thomas P. Conrads, and Donna Felschow | 587 |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----|

**REGULAR ARTICLES**

- |                                                                                                                                                                                         |                                                                                                                                                   |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Cloning and Characterization of a<br>Proliferation-Associated Cytokine-Inducible<br>Protein, CIP29                                                                                      | Seiji Fukuda, Ding Wen Wu, Kenneth Stark,<br>and Louis M. Pelus                                                                                   | 593 |
| Identification and Characterization of<br><i>Streptococcus pneumoniae</i> Ffh, a Homologue of<br>SRP54 Subunit of Mammalian Signal<br>Recognition Particle                              | Feng Zheng, Christopher Zook,<br>Laura Campo, Martin Henault,<br>Harold Watson, Q. May Wang,<br>and Sheng-Bin Peng                                | 601 |
| EVI1 Is Expressed in Megakaryocyte Cell<br>Lineage and Enforced Expression of EVI1 in<br>UT-7/GM Cells Induces Megakaryocyte<br>Differentiation                                         | Seiichi Shimizu, Toshiro Nagasawa,<br>Osamu Katoh, Norio Komatsu, Jun Yokota,<br>and Kazuhiro Morishita                                           | 609 |
| Cloning and Tissue Distribution of Three<br>Murine $\alpha/\beta$ Hydrolase Fold Protein cDNAs                                                                                          | Alasdair J. Edgar and Julia M. Polak                                                                                                              | 617 |
| The Short MCK1350 Promoter/Enhancer<br>Allows for Sufficient Dystrophin Expression in<br>Skeletal Muscles of <i>mdx</i> Mice                                                            | Nancy Larochele, Wahiba Oualikene,<br>Patrick Dunant, Bernard Massie,<br>George Karpati, Josephine Nalbantoglu,<br>and Hanns Lochmuller           | 626 |
| Intestinal Metabolism and Absorption of<br>Cholecystokinin Analogs in Rats                                                                                                              | Sheng-Fang Su, Gordon L. Amidon,<br>and Hye J. Lee                                                                                                | 632 |
| Role of Tryptophan Hydroxylase Phe313 in<br>Determining Substrate Specificity                                                                                                           | S. Colette Daubner, Graham R. Moran,<br>and Paul F. Fitzpatrick                                                                                   | 639 |
| Shikonin Stimulates Glucose Uptake in<br>3T3-L1 Adipocytes via an Insulin-Independent<br>Tyrosine Kinase Pathway                                                                        | Reiko Kamei, Yoshinori Kitagawa,<br>Michinori Kadokura, Fumiyuki Hattori,<br>Osamu Hazeki, Yousuke Ebina,<br>Tatsuro Nishihara, and Shinzo Oikawa | 642 |
| Metal-Catalyzed Oxidation of Extracellular<br>Matrix Proteins Promotes Human Mesangial<br>Cell Apoptosis and Is Associated with<br>Enhanced Expression of Bax and Caspase<br>Activation | Joseph Mattana, Sergei Kochlatyi,<br>and Nora Gibbons                                                                                             | 652 |
| Human Eukaryotic Initiation Factor 4AII<br>Associates with Hepatitis C Virus NS5B<br>Protein <i>in Vitro</i>                                                                            | Kiyoshi Kyono, Masahiko Miyashiro,<br>and Ikuhiko Taguchi                                                                                         | 659 |
| Expression and Function of NJ-1 Surface<br>Antigen in Megakaryopoiesis                                                                                                                  | Hua Tang, Xiu-Qin Zhang, Takeshi Naruse,<br>Kazuyuki Ohbo, and Toshio Suda                                                                        | 667 |

|                                                                                                                                                                                                                                |                                                                                                                                                                    |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Apoptosis and Related Proteins during Parturition in Prostaglandin F Receptor-Deficient Mice                                                                                                                                   | Junwu Mu, Toru Kanzaki, Xiaoe Si, Takuji Tomimatsu, Hirotugu Fukuda, Eriko Fujii, Takayoshi Hosono, Yuji Murata, Yukihiko Sugimoto, and Atsushi Ichikawa           | 675 |
| Investigation of Antigen Delivery Route <i>in Vivo</i> and Immune-Boosting Effects Mediated by pH-Sensitive Liposomes Encapsulated with K <sup>b</sup> -Restricted CTL Epitope                                                 | Ki-Young Lee, Eunyoung Chun, and Baik L. Seong                                                                                                                     | 682 |
| Arachidonate Release and Eicosanoid Generation by Group IIE Phospholipase A <sub>2</sub>                                                                                                                                       | Makoto Murakami, Kumiko Yoshihara, Satoko Shimbara, Gerard Lambeau, Alan Singer, Michael H. Gelb, Masatsugu Sawada, Naoki Inagaki, Hiroichi Nagai, and Ichiro Kudo | 689 |
| Isolation of the Interacting Molecules with GEX-3 by a Novel Functional Screening                                                                                                                                              | Daisuke Tsuboi, Hiroshi Qadota, Katsuhisa Kasuya, Mutsuki Amano, and Kozo Kaibuchi                                                                                 | 697 |
| Prediction of the Tertiary Structure of the $\beta$ -Secretase Zymogen                                                                                                                                                         | Kuo-Chen Chou and W. Jeffrey Howe                                                                                                                                  | 702 |
| Skeletal Muscle Injury Induces Hepatocyte Growth Factor Expression in Spleen                                                                                                                                                   | Shunichi Suzuki, Keitaro Yamanouchi, Chie Soeta, Yuko Katakai, Rie Harada, Kunihiro Naito, and Hideaki Tojo                                                        | 709 |
| Identification and Characterization of a Novel Cancer/Testis Antigen Gene <i>CAGE</i>                                                                                                                                          | Bomsoo Cho, Yoon Lim, Dae-Yeon Lee, Sae-Young Park, Hosoon Lee, Woo Ho Kim, Hankwang Yang, Yung-Jue Bang, and Doo-Il Jeoung                                        | 715 |
| Inhibition of Hydroxyapatite Crystal Growth by Bone Proteoglycans and Proteoglycan Components                                                                                                                                  | Sarah G. Rees, R. Peter Shellis, and Graham Embery                                                                                                                 | 727 |
| Presence of a Helix in Human CD4 Cytoplasmic Domain Promotes Binding to HIV-1 Nef Protein                                                                                                                                      | Andrea Preusser, Lars Briese, and Dieter Willbold                                                                                                                  | 734 |
| <i>AQR1</i> Gene (ORF <i>YNL065w</i> ) Encodes a Plasma Membrane Transporter of the Major Facilitator Superfamily That Confers Resistance to Short-Chain Monocarboxylic Acids and Quinidine in <i>Saccharomyces cerevisiae</i> | Sandra Tenreiro, Patrícia A. Nunes, Cristina A. Viegas, Mónica S. Neves, Miguel C. Teixeira, M. Guadalupe Cabral, and Isabel Sá-Correia                            | 741 |
| Secreted CEACAM1 Splice Variants in Rat Cell Lines and <i>in Vivo</i> in Rat Serum                                                                                                                                             | Matthias Budt, Beate Michely, Mario M. Müller, Werner Reutter, and Lothar Lucka                                                                                    | 749 |
| Loops within the CD11c I Domain Critical for Specific Recognition of Fibrinogen                                                                                                                                                | Jeungsook Choi and Sang-Uk Nham                                                                                                                                    | 756 |
| Osteoblastic Differentiation Induced by Transcription Factor Decoy against Estrogen Receptor $\alpha$ Gene                                                                                                                     | Elisabetta Lambertini, Letizia Penolazzi, Gianluca Aguiari, Laura del Senno, Furio Pezzetti, Vincenzo Sollazzo, and Roberta Piva                                   | 761 |



|                                                                                                               |                                                                                                                                                                                                                                              |     |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Identification and Characterization of a Novel Hypertonicity-Responsive Element in the Human Aquaporin-1 Gene | Fuminori Umenishi and Robert W. Schrier                                                                                                                                                                                                      | 771 |
| Genetic Variants of the Receptors for Thromboxane A2 and IL-4 in Atopic Dermatitis                            | Keiko Tanaka, Mark H. Roberts, Naoko Yamamoto, Hisashi Sugiura, Masami Uehara, Xiao-Quan Mao, Taro Shirakawa, and Julian M. Hopkin                                                                                                           | 776 |
| Increased Plasma HB-EGF Associated with Obesity and Coronary Artery Disease                                   | Satoru Matsumoto, Ken Kishida, Iichiro Shimomura, Akira Yamada, Norikazu Maeda, Hiroyuki Nagaretani, Morihiro Matsuda, Hitoshi Nishizawa, Shinji Kihara, Shizuya Yamashita, Shinji Tamura, Sumio Kawata, Tohru Funahashi, and Yuji Matsuzawa | 781 |

## ERRATUM

|                                                                                                                                                                                                                                      |  |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----|
| Volume <b>291</b> , Number 2 (2002), in the article "Inhibition of the Mitochondrial Permeability Transition by Aldehydes," by William A. Irwin, Lawrence D. Gaspers, and John A. Thomas, pages 215–219 (doi:10.1006/bbrc.2002.6457) |  | 787 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----|

## Number 4, April 12, 2002

|                                                                                                                                             |                                                                                                                                                           |     |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Amino Acids Activated by Fengycin Synthetase FenE                                                                                           | Hung-Yu Shu, Guang-Huey Lin, Ying-Chung Wu, Johannes Scheng-Ming Tschen, and Shih-Tung Liu                                                                | 789 |
| L- $\delta$ -( $\alpha$ -Aminoadipoyl)-L-cysteine-D-valine Synthetase: Production of Dipeptides Containing Valine Residue at Its C-Terminus | Chia-Yang Shiau and Yu-Tien Liu                                                                                                                           | 794 |
| $\beta$ -Endorphin-like Peptide SLTCLVKGFY Is a Selective Agonist of Nonopioid $\beta$ -Endorphin Receptor                                  | E. V. Navolotskaya, T. A. Zargarova, N. V. Malkova, S. B. Krasnova, V. P. Zav'yalov, and V. M. Lipkin                                                     | 799 |
| Oxidative Stress in Vitiligo: Photo-oxidation of Pterins Produces H <sub>2</sub> O <sub>2</sub> and Pterin-6-carboxylic Acid                | Hartmut Rokos, Wayne D. Beazley, and Karin U. Schallreuter                                                                                                | 805 |
| Kinetics of Nitric Oxide Binding to R-State Hemoglobin                                                                                      | Zhi Huang, K. B. Ucer, Timothy Murphy, Richard T. Williams, S. Bruce King, and Daniel B. Kim-Shapiro                                                      | 812 |
| Hyaluronidases and CD44 Undergo Differential Modulation during Chondrogenesis                                                               | Steven B. Nicoll, Ory Barak, Antonei B. Csóka, Rajendra S. Bhatnagar, and Robert Stern                                                                    | 819 |
| Evidence of Both Extra- and Intracellular Cysteine Targets of Protein Modification for Activation of RET Kinase                             | Anwarul A. Akhand, Takanari Ikeyama, Satoru Akazawa, Masashi Kato, Khaled Hossain, Kozue Takeda, Haruhiko Suzuki, Masahide Takahashi, and Izumi Nakashima | 826 |

|                                                                                                                                                   |                                                                                                                                 |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----|
| HIV-1 Vif-Derived Peptide Inhibits Drug-Resistant HIV Proteases                                                                                   | Immanuel Blumenzweig, Lea Baraz, Assaf Friedler, U. Helena Danielson, Chaim Gilon, Michael Steinitz, and Moshe Kotler           | 832 |
| Phytochemical Inhibition of Interleukin-4-Activated Stat6 and Expression of VCAM-1                                                                | Bruno Schnyder, Silvia Schnyder-Candrian, Andreas Panski, Heike Bömmel, Markus Heim, Albert Duschl, and René Moser              | 841 |
| OC-3, a Novel Mammalian Member of the ONECUT Class of Transcription Factors                                                                       | Vinciane Vanhorenbeeck, Patrick Jacquemin, Frédéric P. Lemaigre, and Guy G. Rousseau                                            | 848 |
| Chemical Synthesis and Kinetic Study of the Smallest Naturally Occurring Trypsin Inhibitor SFTI-1 Isolated from Sunflower Seeds and Its Analogues | Ewa Zabłotna, Katarzyna Kaźmierczak, Anna Jaśkiewicz, Maciej Stawikowski, Gotfryd Kupryszewski, and Krzysztof Rolka             | 855 |
| Different Effects of Glucose Starvation on Expression and Stability of VEGF mRNA Isoforms in Murine Ovarian Cancer Cells                          | Lin Zhang, Jose-Ramon Conejo-Garcia, Nuo Yang, Wei Huang, Alisha Mohamed-Hadley, Weijia Yao, Fabian Benencia, and George Coukos | 860 |
| Macrophage Activation Includes High Intracellular Myeloperoxidase Activity                                                                        | Maria Rita Rodrigues, Dunia Rodriguez, Momtchilo Russo, and Ana Campa                                                           | 869 |
| An Infrared Study of the Thermal and pH Stabilities of the GPI-Alkaline Phosphatase from Bovine Intestine                                         | Muriel Bortolato, Françoise Besson, and Bernard Roux                                                                            | 874 |
| Identification of LPS-Binding Peptide Fragment of MD-2, a Toll-Receptor Accessory Protein                                                         | Mateja Manček, Primož Pristovšek, and Roman Jerala                                                                              | 880 |
| The Role of Angiostatin in the Spontaneous Bone and Prostate Cancers of Pet Dogs                                                                  | S. R. Pirie-Shepherd, K. T. Coffman, D. Resnick, R. Chan, O. Kisker, J. Folkman, and D. J. Waters                               | 886 |
| Role of Cbl in Shear-Activation of PI 3-Kinase and JNK in Endothelial Cells                                                                       | Hui Miao, Suli Yuan, Yingxiao Wang, Alexander Tsygankov, and Shu Chien                                                          | 892 |
| Hormone-Sensitive Lipase Is Not Required for Cholesteryl Ester Hydrolysis in Macrophages                                                          | Juan Antonio Contreras                                                                                                          | 900 |
| Tributyltin Causes Cytochrome <i>c</i> Release from Isolated Mitochondria by Two Discrete Mechanisms                                              | Vladimir Gogvadze, Helene Stridh, Sten Orrenius, and Ian Cotgreave                                                              | 904 |
| The Novel Rab11-FIP/Rip/RCP Family of Proteins Displays Extensive Homo- and Hetero-Interacting Abilities                                          | Deborah M. Wallace, Andrew J. Lindsay, Alan G. Hendrick, and Mary W. McCaffrey                                                  | 909 |
| The Roles of LAT in Platelet Signaling Induced by Collagen, TxA <sub>2</sub> , or ADP                                                             | Moon J. Cho, Tamara I. Pestina, Shirley A. Steward, Carl W. Jackson, and T. Kent Gartner                                        | 916 |



|                                                                                                                                                          |                                                                                                                                                                 |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Mechanism of Specific Recognition of the <i>aidB</i> Promoter by $\sigma^s$ -RNA Polymerase                                                              | <b>Stephan Lacour, Annie Kolb, Alexander Jakob Boris Zehnder, and Paolo Landini</b>                                                                             | <b>922</b>  |
| Pentapeptide Amides Interfere with the Aggregation of $\beta$ -Amyloid Peptide of Alzheimer's Disease                                                    | <b>Csaba Hetényi, Zoltán Szabó, Éva Klement, Zsolt Datki, Tamás Körtvélyesi, Márta Zarándi, and Botond Penke</b>                                                | <b>931</b>  |
| Differential Effects of Histone Deacetylase Inhibitors on Interleukin-18 Gene Expression in Myeloid Cells                                                | <b>Noriko Koyama, Steffen Koschmieder, Sandhya Tyagi, Heike Nürnberger, Sandra Wagner, U. Böcker, Dieter Hoelzer, Oliver Gerhard Ottmann, and Uwe Kalina</b>    | <b>937</b>  |
| Effects of Platelet-Activating Factor, Tumor Necrosis Factor, and Interleukin-1 $\alpha$ on the Expression of Apolipoprotein M in HepG2 Cells            | <b>Ning Xu, Xiao-Ying Zhang, Xuan Dong, Ulf Ekström, Qing Ye, and Peter Nilsson-Ehle</b>                                                                        | <b>944</b>  |
| Differential Regulation of Neutrophil Phospholipase D Activity and Degranulation                                                                         | <b>Jen-sie Tou</b>                                                                                                                                              | <b>951</b>  |
| Cytoplasmic TSC-22 (Transforming Growth Factor- $\beta$ -Stimulated Clone-22) Markedly Enhances the Radiation Sensitivity of Salivary Gland Cancer Cells | <b>Satoshi Hino, Hitoshi Kawamata, Fumie Omotehara, Daisuke Uchida, Yoshihiro Miwa, Nasima-Mila Begum, Hideo Yoshida, Mitsunobu Sato, and Takahiro Fujimori</b> | <b>957</b>  |
| L-Methionine- $\gamma$ -lyase, as a Target to Inhibit Malodorous Bacterial Growth by Trifluoromethionine                                                 | <b>Mamiko Yoshimura, Yoshio Nakano, and Toshihiko Koga</b>                                                                                                      | <b>964</b>  |
| Transcriptional Regulation of Mouse MARCKS Promoter in Immortalized Hippocampal Cells                                                                    | <b>Le Wang, Xingge Liu, and Robert H. Lenox</b>                                                                                                                 | <b>969</b>  |
| Visualization of Sequential Exocytosis in Rat Pancreatic Islet $\beta$ Cells                                                                             | <b>Yuk Man Leung, Laura Sheu, Edwin Kwan, Guotang Wang, Robert Tsushima, and Herbert Gaisano</b>                                                                | <b>980</b>  |
| Thrombopoietin Induces P-Selectin Expression on Platelets and Subsequent Platelet/Leukocyte Interactions                                                 | <b>Heather E. Tibbles, Christopher S. Navara, Michael A. Hupke, Alexei O. Vassilev, and Fatih M. Uckun</b>                                                      | <b>987</b>  |
| Identification of a Novel Protein p59 <sup>scr</sup> , Which Is Expressed at Specific Stages of Mouse Spermatogenesis                                    | <b>Makoto Senoo, Shigetaka Hoshino, Naoko Mochida, Yasuko Matsumura, and Sonoko Habu</b>                                                                        | <b>992</b>  |
| Transgenic Expression of the EXT2 Gene in Developing Chondrocytes Enhances the Synthesis of Heparan Sulfate and Bone Formation in Mice                   | <b>Ko-ichi Morimoto, Takahiko Shimizu, Kiyoshi Furukawa, Hidenori Morio, Hisashi Kurosawa, and Takuji Shirasawa</b>                                             | <b>999</b>  |
| The Effect of Antioxidants on Glycated Albumin-Induced Cytotoxicity in Bovine Retinal Pericytes                                                          | <b>Jaetaek Kim, Kwang-seok Kim, Jong-wook Shinn, Yeon-sahng Oh, Heung-tae Kim, Inho Jo, and Soon-hyun Shinn</b>                                                 | <b>1010</b> |

|                                                                                                                                                                 |                                                                                                                                                                         |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Human Retinal Pigment Epithelial Cells Express Scavenger Receptors BI and BII                                                                                   | Keith G. Duncan, Kathy R. Bailey, John P. Kane, and Daniel M. Schwartz                                                                                                  | 1017 |
| Interaction of S100 Proteins with the Antiallergic Drugs, Olopatadine, Amlexanox, and Cromolyn: Identification of Putative Drug Binding Sites on S100A1 Protein | Miki Okada, Hiroshi Tokumitsu, Yasuo Kubota, and Ryoji Kobayashi                                                                                                        | 1023 |
| Ghrelin, Macronutrient Intake and Dietary Preferences in Long-Evans Rats                                                                                        | Bernard Beck, Nadine Musse, and Alain Stricker-Krongrad                                                                                                                 | 1031 |
| Discovery of a Stable Dimeric Mutant of Cyanovirin-N (CV-N) from a T7 Phage-Displayed CV-N Mutant Library                                                       | Zhaozhong Han, Changyun Xiong, Toshiyuki Mori, and Michael R. Boyd                                                                                                      | 1036 |
| Detection of a Novel Variant Human Hemoglobin by Electrospray Ionization Mass Spectrometry                                                                      | Heinz Troxler, Frank Neuheiser, Peter Kleinert, Thomas Kuster, Claus W. Heizmann, Ragna Sack, Peter Hunziker, Thomas J. Neuhaus, Marlis Schmid, and Hannes Frischknecht | 1044 |
| The Human Monocarboxylate Transporter, MCT1: Genomic Organization and Promoter Analysis                                                                         | Mark A. Cuff and Soraya P. Shirazi-Beechey                                                                                                                              | 1048 |
| BAY 41-2272 Activates Two Isoforms of Nitric Oxide-Sensitive Guanylyl Cyclase                                                                                   | Markus Koglin, Johannes-Peter Stasch, and Sönke Behrends                                                                                                                | 1057 |
| Species-Specific and Isoform-Specific RNA Binding of Human and Mouse Fragile X Mental Retardation Proteins                                                      | Robert B. Denman and Ying Ju Sung                                                                                                                                       | 1063 |
| Identification and Fine Mapping of IgG and IgE Epitopes in Ovomucoid                                                                                            | Yoshinori Mine and Jie Wei Zhang                                                                                                                                        | 1070 |
| Design and Synthesis of Highly Potent and Selective Melanotropin Analogues of SHU9119 Modified at Position 6                                                    | Paolo Grieco, Guoxia Han, David Weinberg, Tanya MacNeil, L. H. T. Van der Ploeg, and Victor J. Hruby                                                                    | 1075 |
| Antimorphic PV.1 Causes Secondary Axis by Inducing Ectopic Organizer                                                                                            | Yoo-Seok Hwang, Jeong-Jae Seo, Sang-Wook Cha, Hyun-Shik Lee, Sung-Young Lee, Dong-Hyun Roh, Hsiang-fu Kung, Jaebong Kim, and Mae Ja Park                                | 1081 |
| Potent and Selective Partial Ecdysone Agonist Activity of Chromafenozide in Sf9 Cells                                                                           | Tetsuya Toya, Hiroshi Fukasawa, Akio Masui, and Yasuyuki Endo                                                                                                           | 1087 |
| The Adhesion Receptor CD-31 Can Be Primed to Rapidly Adjust the Neutrophil Cytoskeleton                                                                         | Ivan Dimitrijevic, Lena Axelsson, and Tommy Andersson                                                                                                                   | 1092 |
| p85 Binds to G-Actin in a Ca <sup>2+</sup> /Calmodulin-Dependent Manner, Thus Regulating the Initiation of Cytokinesis in <i>Tetrahymena</i>                    | Kohsuke Gonda and Osamu Numata                                                                                                                                          | 1098 |



|                                                                                                                                                                                   |                                                                                                           |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------|
| Synthesis and Characterization of<br><i>N</i> -Coumaroyltyramine as a Potent<br>Phytochemical Which Arrests Human<br>Transformed Cells via Inhibiting Protein<br>Tyrosine Kinases | <b>Jae B. Park and Norberta Schoene</b>                                                                   | <b>1104</b> |
| A Circular RNA–DNA Enzyme Obtained by<br><i>in Vitro</i> Selection                                                                                                                | <b>Xiang-duo Kong, Shi-zhen Zhu,<br/>Xiao-jun Gou, Xiao-ping Wang,<br/>Hong-ying Zhang, and Jin Zhang</b> | <b>1111</b> |

**Number 5, April 19, 2002**

**Honoring Konrad Bloch**

**Guest Editors: Howard Goldfine, William J. Lennarz, and Dennis E. Vance**

|                                                                                                                                      |                                                               |             |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------|
| Konrad Bloch—A Pioneer in Cholesterol and<br>Fatty Acid Biosynthesis                                                                 | <b>Dennis E. Vance and Howard Goldfine</b>                    | <b>1117</b> |
| The Publications of Konrad Bloch                                                                                                     |                                                               | <b>1121</b> |
| Sterol Biosynthesis: The Early Days                                                                                                  | <b>John Warcup Cornforth</b>                                  | <b>1129</b> |
| Membrane-Bound Enzymes of Cholesterol<br>Synthesis from Lanosterol                                                                   | <b>James L. Gaylor</b>                                        | <b>1139</b> |
| Cholesterol, Hydroxycholesterols, and Bile<br>Acids                                                                                  | <b>Norman B. Javitt</b>                                       | <b>1147</b> |
| Forty Years of Bacterial Fatty Acid Synthesis                                                                                        | <b>Charles O. Rock and Suzanne Jackowski</b>                  | <b>1155</b> |
| Remembering Konrad Bloch                                                                                                             | <b>Christian R. H. Raetz</b>                                  | <b>1167</b> |
| Direct Hydration of 3-Octynoyl-CoA by<br>Crotonase: A Missing Link in Konrad Bloch's<br>Enzymatic Studies with 3-Alkynoyl Thioesters | <b>Olivier D. Alipui, Dongyan Zhang,<br/>and Horst Schulz</b> | <b>1171</b> |
| My Time in Professor Konrad Bloch's<br>Laboratory                                                                                    | <b>Irving Zabin</b>                                           | <b>1175</b> |
| My Years with Konrad, a Memoir                                                                                                       | <b>Ray Clayton</b>                                            | <b>1179</b> |
| My Hand Was on the Doorknob to Leave                                                                                                 | <b>Alvin J. Clark</b>                                         | <b>1187</b> |
| Insects, Oxygen, and Iron                                                                                                            | <b>John H. Law</b>                                            | <b>1191</b> |
| Memories of a Graduate Student                                                                                                       | <b>Anne Norris Baldwin</b>                                    | <b>1197</b> |
| From Unsaturated Fatty Acids to Lipid<br>Polymorphism                                                                                | <b>Howard Goldfine</b>                                        | <b>1201</b> |
| Memories and Outcomes of My Postdoctoral<br>Work with Konrad Bloch                                                                   | <b>William J. Lennarz</b>                                     | <b>1209</b> |
| Yeast Hydroxy Fatty Acids and Fungal<br>Polyketides: Lessons Learned from the Konrad<br>Bloch Laboratory                             | <b>Robley J. Light</b>                                        | <b>1213</b> |
| My Bloch Years: 1961–1963 and Beyond                                                                                                 | <b>Armand J. Fulco</b>                                        | <b>1221</b> |
| A Model Scientist                                                                                                                    | <b>Andrew A. Kandutsch</b>                                    | <b>1227</b> |

|                                                                                                                                         |                                |             |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------|
| Remembrances of Konrad Emil Bloch—Molecular Biology in a Lipid Lab in the 1960s: Studies on Amino Acid Activation for Protein Synthesis | <b>Ronald E. Pearlman</b>      | <b>1231</b> |
| My Life in Konrad's Lab                                                                                                                 | <b>Bernard M. Babior</b>       | <b>1237</b> |
| The <i>Euglena</i> Mystery: Some Thoughts on Aerobic Desaturation                                                                       | <b>Michael I. Gurr</b>         | <b>1239</b> |
| Membrane-Bound Lecithin–Retinol Acyltransferase                                                                                         | <b>Robert R. Rando</b>         | <b>1243</b> |
| Variations on the Theme “Tier-chemie ist Schmier-chemie”                                                                                | <b>George M. Helmkamp, Jr.</b> | <b>1251</b> |
| Lipids and Life                                                                                                                         | <b>David N. Brindley</b>       | <b>1255</b> |
| The Road to Squalene Synthase                                                                                                           | <b>Ishaiahu Shechter</b>       | <b>1261</b> |
| Konrad Bloch, Evolution, and the RNA World                                                                                              | <b>Harold B. White III</b>     | <b>1267</b> |
| A Stimulating Factor for Fatty Acid Biosynthesis—Research with Konrad Bloch: Mentor and Friend                                          | <b>Dennis E. Vance</b>         | <b>1273</b> |
| Lipids and Me                                                                                                                           | <b>Michael Sinensky</b>        | <b>1279</b> |
| The First Step of Oxygenation in Cholesterol Biosynthesis                                                                               | <b>Teruo Ono</b>               | <b>1283</b> |
| Sterols and Acylated Proteins in Mycoplasmas                                                                                            | <b>Shlomo Rottem</b>           | <b>1289</b> |
| Supernatant Protein Relevant to the Activity of Membrane-Bound Enzymes: Studies on Lathosterol 5-Desaturase                             | <b>Teruo Ishibashi</b>         | <b>1293</b> |
| Author Index for Volume 292                                                                                                             |                                | <b>1299</b> |

**Volume 293, Number 1, April 26, 2002**

|                                                                                                                                                                                      |                                                                                                                                     |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Farnesol as an inhibitor and substrate for rabbit liver microsomal P450 enzymes                                                                                                      | <b>Gregory M. Raner, April Q. Muir, Clarice W. Lowry, and Brian A. Davis</b>                                                        | <b>1</b>  |
| Decreased subunit exchange of heat-treated lens $\alpha$ A-crystallin                                                                                                                | <b>Jack J.-N. Liang and Ling Fu</b>                                                                                                 | <b>7</b>  |
| A single nucleotide polymorphism in the promoter region of the human gene for osteoprotegerin is related to vascular morphology and function                                         | <b>Helena Brändström, Fredrik Stiger, Lars Lind, Thomas Kahan, Håkan Melhus, and Andreas Kindmark</b>                               | <b>13</b> |
| A two step model aimed at delivering antisense oligonucleotides in targeted cells                                                                                                    | <b>J. Toth, I. Boszormenyi, Z.S. Majer, I. Laczko, C. Malvy, M. Hollosi, and J.-R. Bertrand</b>                                     | <b>18</b> |
| Evolution of placentally expressed cathepsins                                                                                                                                        | <b>Katia Sol-Church, Gina N. Picerno, Deborah L. Stabley, Jennifer French, Sixun Xing, Greg P. Bertenshaw, and Robert W. Mason</b>  | <b>23</b> |
| Splice variants of the $\beta$ -site APP-cleaving enzyme BACE1 in human brain and pancreas                                                                                           | <b>Robert Ehehalt, Beate Michel, Davide De Pietri Tonelli, Daniele Zacchetti, Kai Simons, and Patrick Keller</b>                    | <b>30</b> |
| Osteoprotegerin differentially regulates protease expression in osteoclast cultures                                                                                                  | <b>Y. Wittrant, S. Couillaud, S. Theoleyre, C. Dunstan, D. Heymann, and F. Rédini</b>                                               | <b>38</b> |
| Role of the second immunoglobulin-like loop of nectin in cell-cell adhesion                                                                                                          | <b>Yumiko Momose, Tomoyuki Honda, Maiko Inagaki, Kazuya Shimizu, Kenji Irie, Hiroyuki Nakanishi, and Yoshimi Takai</b>              | <b>45</b> |
| Binding properties of a locust's chemosensory protein                                                                                                                                | <b>Liping Ban, Long Zhang, Yuhua Yan, and Paolo Pelosi</b>                                                                          | <b>50</b> |
| The amino-terminal region of insulin-like growth factor binding protein-3, <sup>1-95</sup> IGFBP-3, induces apoptosis of MCF-7 breast carcinoma cells                                | <b>Laurence Bernard, Sylvie Babajko, Michel Binoux, and Jean-Marc Ricort</b>                                                        | <b>55</b> |
| Lack of matrix metalloproteinase (MMP)-1 and -3 expression in Ewing sarcoma may be due to loss of accessibility of the MMP regulatory element to the specific fusion protein in vivo | <b>Hiroki Yabe, Mariko Fukuma, Fumihiko Urano, Koichi Yoshida, Shingo Kato, Yoshiaki Toyama, Jun-ichi Hata, and Akihiro Umezawa</b> | <b>61</b> |
| Inhibitors of the tyrosine kinase signaling cascade attenuated thrombin-induced guinea pig airway smooth muscle cell proliferation                                                   | <b>Fai Tsang, Hui Hwa Choo, Gavin S. Dawe, and W.S. Fred Wong</b>                                                                   | <b>72</b> |



|                                                                                                                                                                                                      |                                                                                                                                                    |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <i>GDH1</i> expression is regulated by <i>GLN3</i> , <i>GCN4</i> , and <i>HAP4</i> under respiratory growth                                                                                          | <b>Lina Riego, Amaranta Avendaño, Alexander DeLuna, Ekaterina Rodríguez, and Alicia González</b>                                                   | <b>79</b>  |
| Adhesion of osteosarcoma cells to the 70-kDa core region of thrombospondin-1 is mediated by the $\alpha 4\beta 1$ integrin                                                                           | <b>Stephan Decker, Frans van Valen, and Peter Vischer</b>                                                                                          | <b>86</b>  |
| WAVE2 serves a functional partner of IRSp53 by regulating its interaction with Rac                                                                                                                   | <b>Hiroaki Miki and Tadaomi Takenawa</b>                                                                                                           | <b>93</b>  |
| In vitro and in vivo hepatic transport of the magnetic resonance imaging contrast agent B22956/1: role of MRP proteins                                                                               | <b>Vito Lorusso, Lorella Pascolo, Cristina Ferneti, Massimo Visigalli, Pierlucio Anelli, and Claudio Tiribelli</b>                                 | <b>100</b> |
| The preovulatory rise of ovarian ornithine decarboxylase is required for progesterone secretion by the corpus luteum                                                                                 | <b>Carmen M. Bastida, Francisco Tejada, Asunción Cremades, and Rafael Peñafiel</b>                                                                 | <b>106</b> |
| Increased MAPK signaling during in vitro muscle wounding                                                                                                                                             | <b>K. Yeow, C. Cabane, L. Turchi, G. Ponzio, and B. Dérijard</b>                                                                                   | <b>112</b> |
| Identification of the regulatory region required for ubiquitination of the cyclin kinase inhibitor, p21                                                                                              | <b>Kunihiko Fukuchi, Tamio Hagiwara, Kentarou Nakamura, Sachiko Ichimura, Kouichi Tatsumi, and Kunihide Gomi</b>                                   | <b>120</b> |
| Epigenetic control of mouse receptor activator of NF- $\kappa$ B ligand gene expression                                                                                                              | <b>Sohei Kitazawa and Riko Kitazawa</b>                                                                                                            | <b>126</b> |
| Mechanisms of up-regulation of single calcium channels by serotonin in <i>Helix pomatia</i> neurons                                                                                                  | <b>E.A. Lukyanetz, A.V. Sotkis, and P.G. Kostyuk</b>                                                                                               | <b>132</b> |
| Degradation of ornithine decarboxylase in <i>Saccharomyces cerevisiae</i> is ubiquitin independent                                                                                                   | <b>Shilpa Gandre and Chaim Kahana</b>                                                                                                              | <b>139</b> |
| Reduction in cytochrome P-450 enzyme expression is associated with repression of CAR (constitutive androstane receptor) and PXR (pregnane X receptor) in mouse liver during the acute phase response | <b>Anne P. Beigneux, Arthur H. Moser, Judy K. Shigenaga, Carl Grunfeld, and Kenneth R. Feingold</b>                                                | <b>145</b> |
| Expression of the Musashi1 gene encoding the RNA-binding protein in human hepatoma cell lines                                                                                                        | <b>Hong-Jin Shu, Takafumi Saito, Hisayoshi Watanabe, Jun-Itu Ito, Hiroaki Takeda, Hideyuki Okano, and Sumio Kawata</b>                             | <b>150</b> |
| Characterization of the <i>Mycoplasma hominis</i> <i>ftsZ</i> gene and its sequence variability in mycoplasma clinical isolates                                                                      | <b>K.T. Momynaliev, O.V. Smirnova, V.N. Lazyrev, T.A. Akopian, V.V. Chelysheva, J.A. Ayala, A.N. Simankova, S.N. Borchsenius, and V.M. Govorun</b> | <b>155</b> |
| Characterization of nuclear localization signal in mouse ING1 homolog protein                                                                                                                        | <b>Seckho Ha, Sungmoo Park, Cheol H. Yun, and Yunjaie Choi</b>                                                                                     | <b>163</b> |

|                                                                                                                                                             |                                                                                                                                                             |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Wnt-1 promotes neuronal differentiation and inhibits gliogenesis in P19 cells                                                                               | <b>K. Tang, J. Yang, X. Gao, C. Wang, L. Liu, H. Kitani, T. Atsumi, and N. Jing</b>                                                                         | <b>167</b> |
| Mutated focal adhesion kinase induces apoptosis in a human glioma cell line, T98G                                                                           | <b>Shinya Sakurai, Yoshiko Sonoda, Emiko Koguchi, Nobusada Shinoura, Hirofumi Hamada, and Tadashi Kasahara</b>                                              | <b>174</b> |
| Chromosomal organization and localization of the human histone deacetylase 9 gene ( <i>HDAC9</i> )                                                          | <b>Ulrich Mahlknecht, Susanne Schnittger, Jutta Will, Nurten Cicek, and Dieter Hoelzer</b>                                                                  | <b>182</b> |
| Tumor autocrine motility factor induces hyperpermeability of endothelial and mesothelial cells leading to accumulation of ascites fluid                     | <b>Tatsuyoshi Funasaka, Arayo Haga, Avraham Raz, and Hisamitsu Nagase</b>                                                                                   | <b>192</b> |
| Phospholipase D2 stimulates cell protrusion in v-Src-transformed cells                                                                                      | <b>Yingjie Shen, Yang Zheng, and David A. Foster</b>                                                                                                        | <b>201</b> |
| Alloxan is an inhibitor of the enzyme O-linked <i>N</i> -acetylglucosamine transferase                                                                      | <b>Robert J. Konrad, Fengxue Zhang, John E. Hale, Michael D. Knierman, Gerald W. Becker, and Jeffrey E. Kudlow</b>                                          | <b>207</b> |
| Structural analysis of <i>N</i> -glycans from human neutrophil azurocidin                                                                                   | <b>Mariusz Olczak and Wiesław Wątorek</b>                                                                                                                   | <b>213</b> |
| Carriers for enzymatic attachment of glycosaminoglycan chains to peptide                                                                                    | <b>Keiichi Takagaki, Keinosuke Ishido, Ikuko Kakizaki, Mito Iwafune, and Masahiko Endo</b>                                                                  | <b>220</b> |
| Isolation of Chinese hamster ovary cell <i>pex</i> mutants: two <i>PEX7</i> -defective mutants                                                              | <b>Eiko Yanago, Takahide Hiromasa, Tsuyoshi Matsumura, Naohiko Kinoshita, and Yukio Fujiki</b>                                                              | <b>225</b> |
| Design of novel peptide analogs with potent fungicidal activity, based on PMAP-23 antimicrobial peptide isolated from porcine myeloid                       | <b>Dong Gun Lee, Pyung Il Kim, Yoonkyung Park, Eun-Rhan Woo, Ji Suk Choi, Cheol-Hee Choi, and Kyung-Soo Hahm</b>                                            | <b>231</b> |
| Specific packaging of spliced retroviral vector transcripts lacking the $\Psi$ -region                                                                      | <b>Konstanze Pambalk, Christine Hohenadl, Brian Salmons, Walter H. Günzburg, and Matthias Renner</b>                                                        | <b>239</b> |
| A missense mutant myostatin causes hyperplasia without hypertrophy in the mouse muscle                                                                      | <b>Masumi Nishi, Akihiro Yasue, Shinichirou Nishimatu, Tsutomu Nohno, Takashi Yamaoka, Mitsuo Itakura, Keiji Moriyama, Hideyo Ohuchi, and Sumihare Noji</b> | <b>247</b> |
| Nuclear factor (NF)- $\kappa$ B blockade attenuates but does not abrogate LPS-mediated interleukin (IL)-1 $\beta$ biosynthesis in alveolar epithelial cells | <b>John J. Haddad</b>                                                                                                                                       | <b>252</b> |
| 5'-Nucleotidases: specific assays for five different enzymes in cell extracts                                                                               | <b>Chiara Rampazzo, Cristina Mazzon, Peter Reichard, and Vera Bianchi</b>                                                                                   | <b>258</b> |

|                                                                                                                                                                 |                                                                                                                                                |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Unique capping activity of the recombinant RNA polymerase (L) of vesicular stomatitis virus: association of cellular capping enzyme with the L protein          | <b>Ashim K. Gupta, Manjula Mathur, and Amiya K. Banerjee</b>                                                                                   | <b>264</b> |
| Identification of the peroxisomal $\beta$ -oxidation enzymes involved in the degradation of leukotrienes                                                        | <b>Sacha Ferdinandusse, Thomas Meissner, Ronald J.A. Wanders, and Ertan Mayatepek</b>                                                          | <b>269</b> |
| Genetic analysis of four novel peroxisome proliferator activated receptor- $\gamma$ splice variants in monkey macrophages                                       | <b>Jiming Zhou, Katina M. Wilson, and Jheem D. Medh</b>                                                                                        | <b>274</b> |
| Molecular analysis of expansion, differentiation, and growth factor treatment of human chondrocytes identifies differentiation markers and growth-related genes | <b>Karin Benz, Stephen Breit, Martin Lukoschek, Hans Mau, and Wiltrud Richter</b>                                                              | <b>284</b> |
| Overexpression of VDUP1 mRNA sensitizes HeLa cells to paraquat                                                                                                  | <b>Atsuhiko Joguchi, Izumi Otsuka, Sachi Minagawa, Toshikazu Suzuki, Michihiko Fujii, and Dai Ayusawa</b>                                      | <b>293</b> |
| Restoration of p53 tumor suppressor pathway in human cervical carcinoma cells by sodium arsenite                                                                | <b>Ruey-Hwang Chou and Haimei Huang</b>                                                                                                        | <b>298</b> |
| Enhanced SUMOylation in polyglutamine diseases                                                                                                                  | <b>Hiroko Ueda, Jun Goto, Hideji Hashida, Xia Lin, Kiyomitsu Oyanagi, Hitoshi Kawano, Huda Y. Zoghbi, Ichiro Kanazawa, and Hitoshi Okazawa</b> | <b>307</b> |
| Lipid kinases and $\text{Ca}^{2+}$ signaling in <i>Trypanosoma cruzi</i> stimulated by a synthetic peptide                                                      | <b>Verónica Santander, Mariana Bollo, and Estela Machado-Domenech</b>                                                                          | <b>314</b> |
| Probing the membrane topology of a subunit of the mitochondrial protein translocase, Tim44, with biotin maleimide                                               | <b>Pavel F. Pavlov and Elzbieta Glaser</b>                                                                                                     | <b>321</b> |
| Conserved physical linkage of <i>GnRH-R</i> and <i>RBM8</i> in the medaka and human genomes                                                                     | <b>Kataaki Okubo, Hiroshi Mitani, Kiyoshi Naruse, Mariko Kondo, Akihiro Shima, Minoru Tanaka, and Katsumi Aida</b>                             | <b>327</b> |
| Regulation of angiogenesis by the aging suppressor gene <i>klotho</i>                                                                                           | <b>Keiko Fukino, Toru Suzuki, Yuichiro Saito, Takayuki Shindo, Toshihiro Amaki, Masahiko Kurabayashi, and Ryoza Nagai</b>                      | <b>332</b> |
| LXR $\alpha$ is the dominant regulator of CYP7A1 transcription                                                                                                  | <b>Seema Gupta, William M. Pandak, and Phillip B. Hylemon</b>                                                                                  | <b>338</b> |
| Plasmid DNA activates murine macrophages to induce inflammatory cytokines in a CpG motif-independent manner by complex formation with cationic liposomes        | <b>Kei Yasuda, Yoshiyuki Ogawa, Michiyuki Kishimoto, Toshihide Takagi, Mitsuru Hashida, and Yoshinobu Takakura</b>                             | <b>344</b> |



|                                                                                                                                                                                       |                                                                                                                                                                                                                                                                     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Lethal toxin of <i>Bacillus anthracis</i> causes apoptosis of macrophages                                                                                                             | Serguei G. Popov, Rafael Villasmil, Jessica Bernardi, Edith Grene, Jennifer Cardwell, Aiguo Wu, Darya Alibek, Charles Bailey, and Ken Alibek                                                                                                                        | 349 |
| Identification and characterization of <i>C6orf37</i> , a novel candidate human retinal disease gene on chromosome 6q14                                                               | P.S. Lagali, L.E. Kakuk, I.B. Griesinger, P.W. Wong, and R. Ayyagari                                                                                                                                                                                                | 356 |
| Autoinduction of the trefoil factor 2 (TFF2) promoter requires an upstream <i>cis</i> -acting element                                                                                 | Clemens J. Bulitta, John V. Fleming, Raktima Raychowdhury, Douglas Taupin, Ian Rosenberg, and Timothy C. Wang                                                                                                                                                       | 366 |
| Rab7 gene is up-regulated by cholesterol-rich diet in the liver and artery                                                                                                            | Ji Young Kim, Moon Kyoo Jang, Sang-Sook Lee, Myung-Sook Choi, Song-Hae Bok, Goo Taeg Oh, and Yong Bok Park                                                                                                                                                          | 375 |
| Modulation of intracellular $\text{Ca}^{2+}$ via $\alpha_{1B}$ -adrenoreceptor signaling molecules, $\text{G}\alpha_{\text{h}}$ (transglutaminase II) and phospholipase C- $\delta 1$ | Sung Koo Kang, Dae Kyong Kim, Derek S. Damron, Kwang Jin Baek, and Mie-Jae Im                                                                                                                                                                                       | 383 |
| Differential display of expressed genes in pancreatic cancer cells                                                                                                                    | James Gardner-Thorpe, Hiromichi Ito, Stanley W. Ashley, and Edward E. Whang                                                                                                                                                                                         | 391 |
| Isolation and identification of EG-VEGF/prokineticins as cognate ligands for two orphan G-protein-coupled receptors                                                                   | Yasushi Masuda, Yoshihiro Takatsu, Yasuko Terao, Satoshi Kumano, Yoshihiro Ishibashi, Masato Suenaga, Michiko Abe, Shoji Fukusumi, Takuya Watanabe, Yasushi Shintani, Takao Yamada, Shuji Hinuma, Nobuhiro Inatomi, Tetsuya Ohtaki, Haruo Onda, and Masahiko Fujino | 396 |
| Evidence of two forms of poly(A) polymerase in germinated wheat embryos and their regulation by a novel protein kinase                                                                | Neelam Sharma, Madhusudan Dey, Minati Satpathy, and R.C. Sachar                                                                                                                                                                                                     | 403 |
| Induction of pro-renin converting enzyme mk9 by thyroid hormone in the guinea-pig liver                                                                                               | S.K. Das, D. Chatterjee, and M. Uddin                                                                                                                                                                                                                               | 412 |
| Effects of polyhydroxy compounds on the structure and activity of $\alpha$ -chymotrypsin                                                                                              | L.M. Simon, M. Kotormán, G. Garab, and I. Laczkó                                                                                                                                                                                                                    | 416 |
| Molecular isolation and characterization of novel four subisoforms of ECE-2                                                                                                           | Shoko Ikeda, Noriaki Emoto, Haryanto Alimsardjono, Mitsuhiro Yokoyama, and Masafumi Matsuo                                                                                                                                                                          | 421 |
| A novel protocol based on HN(C)N for rapid resonance assignment in ( $^{15}\text{N}$ , $^{13}\text{C}$ ) labeled proteins: implications to structural genomics                        | Amarnath Chatterjee, Neel S. Bhavesh, Sanjay C. Panchal, and Ramakrishna V. Hosur                                                                                                                                                                                   | 427 |
| Roles of lysine 219 and 255 residues in tobacco acetolactate synthase                                                                                                                 | Tae-Yeol Yoon, Sun-Mee Chung, Soo-Ik Chang, Moon-Young Yoon, Tae-Ryong Hahn, and Jung-Do Choi                                                                                                                                                                       | 433 |

|                                                                                                            |                                                                                                                                                                                                            |     |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| ζ-Crystallin displays strong selectivity for salicylic acid over aspirin                                   | Mohammad D. Bazzi                                                                                                                                                                                          | 440 |
| The dietary flavonoid quercetin modulates HIF-1 $\alpha$ activity in endothelial cells                     | William J. Wilson and Lorenz Poellinger                                                                                                                                                                    | 446 |
| Osteoprotegerin secretion from prostate cancer is stimulated by cytokines, in vitro                        | Hendrik Penno, Carl-Johan Silfverswärd, Anders Frost, Helena Brändström, Olle Nilsson, and Östen Ljunggren                                                                                                 | 451 |
| Cloning, sequencing, and functional studies of the <i>rpoS</i> gene from <i>Vibrio harveyi</i>             | Yi Hsing Lin, Carol Miyamoto, and Edward A. Meighen                                                                                                                                                        | 456 |
| Molecular crosstalk between p70S6k and MAPK cell signaling pathways                                        | Jason A. Lehman and Julian Gomez-Cambronero                                                                                                                                                                | 463 |
| OASIS is a transcriptional activator of CREB/ATF family with a transmembrane domain                        | Yoshihiro Omori, Jun-ichi Imai, Yutaka Suzuki, Shinya Watanabe, Akira Tanigami, and Sumio Sugano                                                                                                           | 470 |
| Protein engineering and properties of human metalloproteinase and thrombospondin 1                         | Ping Wei, Yun-Ge Zhao, Li Zhuang, Douglas R. Hurst, Steve Ruben, and Qing-Xiang Amy Sang                                                                                                                   | 478 |
| Crystal structure of the liganded anti-gibberellin A <sub>4</sub> antibody 4-B8(8)/E9 Fab fragment         | Takashi Murata, Shinya Fushinobu, Masatoshi Nakajima, Osamu Asami, Takeshi Sassa, Takayoshi Wakagi, and Isomaro Yamaguchi                                                                                  | 489 |
| Anti-angiogenic effects of homocysteine on cultured endothelial cells                                      | Salvador Rodríguez-Nieto, Teresa Chavarría, Beatriz Martínez-Poveda, Francisca Sánchez-Jiménez, Ana Rodríguez Quesada, and Miguel Ángel Medina                                                             | 497 |
| ADAMTS1 cleaves aggrecan at multiple sites and is differentially inhibited by metalloproteinase inhibitors | Juan Carlos Rodríguez-Manzaneque, Jennifer Westling, Shelley N.-M. Thai, Alfonso Luque, Vera Knauper, Gillian Murphy, John D. Sandy, and M. Luisa Iruela-Arispe                                            | 501 |
| Multiplex standardized RT-PCR for expression analysis of many genes in small samples                       | Erin L. Crawford, Kristy A. Warner, Sadik A. Khuder, Robert J. Zahorchak, and James C. Willey                                                                                                              | 509 |
| Psychological stress increases bilirubin metabolites in human urine                                        | Tokio Yamaguchi, Izuru Shioji, Akiko Sugimoto, and Masayuki Yamaoka                                                                                                                                        | 517 |
| Pathogenesis of the deafness-associated A1555G mitochondrial DNA mutation                                  | Carla Giordano, Francesco Pallotti, Winsome F. Walker, Nicoletta Checcarelli, Olimpia Musumeci, Filippo Santorelli, Giulia d'Amati, Eric A. Schon, Salvatore DiMauro, Michio Hirano, and Mercy M. Davidson | 521 |
| Structural and functional significance of disulfide bonds in saxatilin, a 7.7 kDa disintegrin              | Sung-Yu Hong, Young-Doug Sohn, Kwang-Hoe Chung, and Doo-Sik Kim                                                                                                                                            | 530 |

|                                                                                                                                                                   |                                                                                                              |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----|
| Silent mutations affect in vivo protein folding in <i>Escherichia coli</i>                                                                                        | Patricia Cortazzo, Carlos Cerveñansky, Mónica Marín, Claude Reiss, Ricardo Ehrlich, and Atilio Deana         | 537 |
| Affinity improvement of the high-affinity immunoglobulin E receptor by phage display                                                                              | Akio Iwasaki, Takeshi Doi, Michihisa Umetani, Masanao Watanabe, Makoto Suda, Yukio Hattori, and Takao Nagoya | 542 |
| Effect of a peroxisome proliferator on $\beta$ -hydroxysteroid dehydrogenase                                                                                      | Jean S. Wong, Xiaoqin Ye, Christy R. Muhlenkamp, and Sarjeet S. Gill                                         | 549 |
| Thyroid hormonal activity of the flame retardants tetrabromobisphenol A and tetrachlorobisphenol A                                                                | Shigeyuki Kitamura, Norimasa Jinno, Shigeru Ohta, Hiroaki Kuroki, and Nariaki Fujimoto                       | 554 |
| Intracerebroventricular interleukin-6 treatment decreases body fat in rats                                                                                        | Kristina Wallenius, Ville Wallenius, David Sunter, Suzanne L. Dickson, and John-Olov Jansson                 | 560 |
| Structural basis for inhibition of cyclin-dependent kinase 9 by flavopiridol                                                                                      | Walter Filgueira de Azevedo Jr., Fernanda Canduri, and Nelson José Freitas da Silveira                       | 566 |
| Use of a hydrophobic dye to indirectly probe the structural organization and conformational plasticity of molecules in amorphous aggregates of carbonic anhydrase | Bishwajit Kundu and Purnananda Guptasarma                                                                    | 572 |
| EST-based identification of genes expressed in the liver of adult Atlantic salmon ( <i>Salmo salar</i> )                                                          | Sarah A. Martin, Nicole C. Caplice, Grace C. Davey, and Richard Powell                                       | 578 |
| Structural and functional characterization of hBD-1(Ser35), a peptide deduced from a DEFB1 polymorphism                                                           | Raffaella Circo, Barbara Skerlavaj, Renato Gennaro, Antonio Amoroso, and Margherita Zanetti                  | 586 |
| A rare protein fluorescence behavior where the emission is dominated by tyrosine: the case of the 33-kDa protein from spinach photosystem II                      | Kangcheng Ruan, Jiong Li, Ruqiang Liang, Chunhe Xu, Yong Yu, Reinhard Lange, and Claude Balny                | 593 |
| Increased levels of tyrosinated $\alpha$ -, $\beta_{III}$ -, and $\beta_{IV}$ -tubulin isotypes in paclitaxel-resistant MCF-7 breast cancer cells                 | Asok Banerjee                                                                                                | 598 |
| Analysis of the migration behaviour of single microtubules in electric fields                                                                                     | R. Stracke, K.J. Böhm, L. Wollweber, J.A. Tuszynski, and E. Unger                                            | 602 |
| Regulation of protein phosphatase 2A by hydrogen peroxide and glutathionylation                                                                                   | R.K. Rao and L.W. Clayton                                                                                    | 610 |
| Up-regulation of PDCD4 in senescent human diploid fibroblasts                                                                                                     | Min-Ji Kang, Hye-Sung Ahn, Ji-Young Lee, Sachiko Matsuhashi, and Woong-Yang Park                             | 617 |



|                                                                                                                                      |                                                                                                                                                     |     |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Leptin mediates a proliferative response in human MCF7 breast cancer cells                                                           | Marie-Noelle Dieudonne,<br>Florence Machinal-Quelin,<br>Valérie Serazin-Leroy,<br>Marie-Christine Leneveu,<br>René Pecquery,<br>and Yves Giudicelli | 622 |
| Polymorphism in exon 4 of the human 3 $\beta$ -hydroxysteroid dehydrogenase type I gene ( <i>HSD3B1</i> ) and blood pressure         | Roland Rosmond, Monique Chagnon,<br>Claude Bouchard, and Per Björntorp                                                                              | 629 |
| Probing the specificity of a trypanosomal aromatic $\alpha$ -hydroxy acid dehydrogenase by site-directed mutagenesis                 | Javier Vernal, András Fiser,<br>Andrej Šali, Miklós Müller,<br>Juan José Cazzulo,<br>and Cristina Nowicki                                           | 633 |
| Translocation of pleckstrin requires its phosphorylation and newly formed ligands                                                    | Denis C. Sloan, Ping Wang, Xiankun Bao,<br>and Richard J. Haslam                                                                                    | 640 |
| Phospholipase C- $\beta$ 2 interacts with mitogen-activated protein kinase kinase 3                                                  | Alastair J. Barr, Robin Marjoram, Jing Xu,<br>and Ralph Snyderman                                                                                   | 647 |
| Enhancement of tolerance to heavy metals and oxidative stress in <i>Dunaliella tertiolecta</i> by Zn-induced phytochelatin synthesis | Naoki Tsuji, Nayumi Hirayanagi,<br>Megumi Okada, Hitoshi Miyasaka,<br>Kazumasa Hirata, Meinhardt H. Zenk,<br>and Kazuhisa Miyamoto                  | 653 |
| KCl activates mitogen-activated protein kinase in rabbit biliary artery                                                              | Alexander Y. Zubkov, K. Shadon Rollins,<br>and John H. Zhang                                                                                        | 660 |

Number 2, May 3, 2002

|                                                                                                                                                                                                          |                                                                                                                                        |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----|
| The fatty acid translocase (FAT)/CD36 and the glucose transporter GLUT4 are localized in different cellular compartments in rat cardiac muscle                                                           | Heidi Müller, Karin Deckers,<br>and Jürgen Eckel                                                                                       | 665 |
| Nestin-positive progenitor cells derived from adult human pancreatic islets of Langerhans contain side population (SP) cells defined by expression of the ABCG2 (BCRP1) ATP-binding cassette transporter | Andreas Lechner, Colin A. Leech,<br>Elizabeth J. Abraham, Anna L. Nolan,<br>and Joel F. Habener                                        | 670 |
| Expression and functional analysis of an inhibitor of apoptosis protein from <i>Trichoplusia ni</i>                                                                                                      | Wen-Tao Liao, Yang Yang,<br>and Xiang-Fu Wu                                                                                            | 675 |
| Inhibitory effect of bFGF on endochondral heterotopic ossification                                                                                                                                       | Shinji Sakano, Yuki Haru Hasegawa,<br>Yoshiharu Murata, Takayasu Ito,<br>Eiichi Genda, Hisashi Iwata,<br>Naoki Ishiguro, and Hisao Seo | 680 |
| Inositol(1,4,5)trisphosphate signal triggers a receptor-mediated ATP release                                                                                                                             | Takeshi Katsuragi, Chiemi Sato,<br>Lou Guangyuan, and Kenji Honda                                                                      | 686 |

|                                                                                                                                                                    |                                                                                                                                                                         |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Lectin as a marker for staining and purification of embryonic pancreatic epithelium                                                                                | <b>Hiroyuki Kobayashi, Troy L. Spilde, Zhixing Li, Julie K. Marosky, Amina M. Bhatia, Mark J. Hembree, Krishna Prasad, Barry L. Preuett, and George K. Gittes</b>       | <b>691</b> |
| <i>Caenorhabditis elegans</i> reticulon interacts with RME-1 during embryogenesis                                                                                  | <b>Jun Iwahashi, Ichiro Kawasaki, Yuji Kohara, Keiko Gengyo-Ando, Shohei Mitani, Yasumi Ohshima, Nobuyuki Hamada, Koyu Hara, Takahito Kashiwagi, and Tetsuya Toyoda</b> | <b>698</b> |
| Aspirin potently inhibits oxidative DNA strand breaks: implications for cancer chemoprevention                                                                     | <b>C. Susan Hsu and Yunbo Li</b>                                                                                                                                        | <b>705</b> |
| VEGF and VEGF receptor levels in retinal and brain-derived endothelial cells                                                                                       | <b>Talitha T. Rajah and Paula Grammas</b>                                                                                                                               | <b>710</b> |
| GPI-anchored GFP signals $Ca^{2+}$ but is homogeneously distributed on the cell surface                                                                            | <b>Stephen Hiscox, Maurice B. Hallett, B. Paul Morgan, and Carmen W. van den Berg</b>                                                                                   | <b>714</b> |
| Human caspase 12 has acquired deleterious mutations                                                                                                                | <b>Heinz Fischer, Ulrich Koenig, Leopold Eckhart, and Erwin Tschachler</b>                                                                                              | <b>722</b> |
| $Ca^{2+}$ -overload inhibits the cardiac SR $Ca^{2+}$ -calmodulin protein kinase activity                                                                          | <b>Thomas Neticadan, Rana M. Temsah, Ken-ichi Kawabata, and Naranjan S. Dhalla</b>                                                                                      | <b>727</b> |
| Two-hybrid cloning and characterization of <i>OSH3</i> , a yeast oxysterol-binding protein homolog                                                                 | <b>Young-Un Park, Oksun Hwang, and Jinmi Kim</b>                                                                                                                        | <b>733</b> |
| Identification of amidicin: a novel peptide with C-terminal amide structure isolated from porcine cardiac atrium                                                   | <b>Yuichiro Ishiyama, Kazuo Kitamura, and Tanenao Eto</b>                                                                                                               | <b>741</b> |
| Chloroplast SecE: evidence for spontaneous insertion into the thylakoid membrane                                                                                   | <b>Jürgen M. Steiner, Thomas Köcher, Christine Nagy, and Wolfgang Löffelhardt</b>                                                                                       | <b>747</b> |
| Identification and characterization of Nek6 protein kinase, a potential human homolog of NIMA histone H3 kinase                                                    | <b>Yoshihiro Hashimoto, Hidetoshi Akita, Mitsunobu Hibino, Kenjiro Kohri, and Makoto Nakanishi</b>                                                                      | <b>753</b> |
| The carboxyterminus of the ATP-binding cassette transporter A1 interacts with a $\beta$ 2-syntrophin/utrophin complex                                              | <b>Christa Buechler, Alfred Boettcher, Salim Maa Bared, Mario C.O. Probst, and Gerd Schmitz</b>                                                                         | <b>759</b> |
| Down-regulation by elicitors of phosphatidylcholine-hydrolyzing phospholipase C and up-regulation of phospholipase A in plant cells                                | <b>Günther F.E. Scherer, Roland U. Paul, André Holk, and Jan Martinec</b>                                                                                               | <b>766</b> |
| Vasoactive intestinal peptide and pituitary adenylate cyclase-activating polypeptide inhibit the MEKK1/MEK4/JNK signaling pathway in endotoxin-activated microglia | <b>Mario Delgado</b>                                                                                                                                                    | <b>771</b> |

|                                                                                                                                                                                            |                                                                                                                    |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----|
| Thapsigargin binds to and inhibits the cloned vanilloid receptor-1                                                                                                                         | Attila Tóth, Noémi Kedei,<br>Tamás Szabó, Yun Wang,<br>and Peter M. Blumberg                                       | 777 |
| In silico sequence analysis of arylamine N-acetyltransferases: evidence for an absence of lateral gene transfer from bacteria to vertebrates and first description of paralogs in bacteria | Fernando Rodrigues-Lima<br>and Jean-Marie Dupret                                                                   | 783 |
| Murine H-rev107 gene encoding a class II tumor suppressor: gene organization and identification of an Sp1/Sp3-binding GC-box required for its transcription                                | Karim Roder, Maria-Jesus Latasa,<br>and Hei Sook Sul                                                               | 793 |
| A secreted form of human ADAM9 has an $\alpha$ -secretase activity for APP                                                                                                                 | Nika Hotoda, Hisashi Koike,<br>Noboru Sasagawa,<br>and Shoichi Ishiura                                             | 800 |
| Overexpression of <i>Arabidopsis</i> response regulators, ARR4/ATRR1/IBC7 and ARR8/ATRR3, alters cytokinin responses differentially in the shoot and in callus formation                   | Yuriko Osakabe, Shinichi Miyata,<br>Takeshi Urao, Motoaki Seki, Kazuo Shinozaki,<br>and Kazuko Yamaguchi-Shinozaki | 806 |
| Identification and characterization of a novel murine multigene family containing a PHD-finger-like motif                                                                                  | R. Trappe, M. Ahmed, B. Gläser, C. Vogel,<br>S. Tascou, P. Burfeind, and W. Engel                                  | 816 |
| Butyrate reduces colonic paracellular permeability by enhancing PPAR $\gamma$ activation                                                                                                   | Mako Kinoshita, Yasuo Suzuki,<br>and Yasushi Saito                                                                 | 827 |
| The mediation of veratryl alcohol in oxidations promoted by lignin peroxidase: the lifetime of veratryl alcohol radical cation                                                             | Enrico Baciocchi, Massimo Bietti,<br>Maria Francesca Gerini,<br>and Osvaldo Lanzalunga                             | 832 |
| Reduction of actin-related protein complex 2/3 in fetal Down syndrome brain                                                                                                                | Rachel Weitzdoerfer, Michael Fountoulakis,<br>and Gert Lubec                                                       | 836 |
| Insulin-secreting INS-1 cells generate a novel type of poorly synchronized Ca <sup>2+</sup> transients                                                                                     | Gernot Dorff, Eva Grapengiesser,<br>and Bo Hellman                                                                 | 842 |
| Azaftig stimulates in vitro lipolysis by rodent and human adipocytes                                                                                                                       | Julio E. Figueroa II, Parakat Vijayagopal,<br>and Chandan Prasad                                                   | 847 |
| Comparison of anti-p53 antibodies in immunoblotting                                                                                                                                        | Miia Turpeinen, Raisa Serpi,<br>Mika Rahkolin, and Kirsi Vähäkangas                                                | 850 |
| A novel and potent ribonuclease from fruiting bodies of the mushroom <i>Pleurotus pulmonarius</i>                                                                                          | X.Y. Ye and T.B. Ng                                                                                                | 857 |
| Cloning, sequencing, and expression analysis of the porcine uroplakin II gene                                                                                                              | Deug-Nam Kwon, Han Geuk Seo,<br>and Jin-Hoi Kim                                                                    | 862 |
| Revised theory on DNA renaturation kinetics and its experimental verification                                                                                                              | R. Murugan                                                                                                         | 870 |
| A novel photoprotein from oceanic squid ( <i>Symplectoteuthis oualaniensis</i> ) with sequence similarity to mammalian carbon-nitrogen hydrolase domains                                   | Tatsuya Fujii, Jung-Youb Ahn,<br>Masaki Kuse, Hitoshi Mori,<br>Tsukasa Matsuda, and Minoru Isobe                   | 874 |



Number 3, May 10, 2002

|                                                                                                                                                                    |                                                                                                                                                      |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Mammalian DSCAMs: roles in the development of the spinal cord, cortex, and cerebellum?                                                                             | Gillzian M. Barlow, Bruce Micales, Xiao-Ning Chen, Gary E. Lyons, and Julie R. Korenberg                                                             | 881 |
| AMP-activated protein kinase kinase: detection with recombinant AMPK $\alpha$ 1 subunit                                                                            | Stephen R. Hamilton, John B. O'Donnell Jr., Andrew Hammet, David Stapleton, Susan A. Habinowski, Anthony R. Means, Bruce E. Kemp, and Lee A. Witters | 892 |
| Synaptotagmin-like protein 5: a novel Rab27A effector with C-terminal tandem C2 domains                                                                            | Taruho S. Kuroda, Mitsunori Fukuda, Hiroyoshi Ariga, and Katsuhiko Mikoshiba                                                                         | 899 |
| Glucocorticoids regulate the CCSP and <i>CYP2B1</i> promoters via C/EBP $\beta$ and $\delta$ in lung cells                                                         | Tove Berg, Tobias N. Cassel, Per E. Schwarze, and Magnus Nord                                                                                        | 907 |
| Induction of human aquaporin-1 gene by retinoic acid in human erythroleukemia HEL cells                                                                            | Fuminori Umenishi and Robert W. Schrier                                                                                                              | 913 |
| pH-sensitive liposomes are efficient carriers for endoplasmic reticulum-targeted drugs in mouse melanoma cells                                                     | Gertrude-E. Costin, Mihaela Trif, Norica Nichita, Raymond A. Dwek, and Stefana M. Petrescu                                                           | 918 |
| Structural characterization of a 2'F-RNA aptamer that binds a HIV-1 SU glycoprotein, gp120                                                                         | N. Sayer, J. Ibrahim, K. Turner, A. Tahiri-Alaoui, and W. James                                                                                      | 924 |
| Matrix protein gene expression in intervertebral disc cells subjected to altered osmolarity                                                                        | Jun Chen, Anthony E. Baer, Phil Y. Paik, Wei Yan, and Lori A. Setton                                                                                 | 932 |
| CXCL8 <sub>(3-73)</sub> K11R/G31P antagonizes ligand binding to the neutrophil CXCR1 and CXCR2 receptors and cellular responses to CXCL8/IL-8                      | Fang Li, Xiaobei Zhang, and John R. Gordon                                                                                                           | 939 |
| APC0576, a novel inhibitor of NF- $\kappa$ B-dependent gene activation, prevents pro-inflammatory cytokine-induced chemokine production in human endothelial cells | Kenji Takehana, Atsushi Konishi, Akiko Oonuki, Misato Noguchi, Koichi Fujita, Yukio Iino, and Tsuyoshi Kobayashi                                     | 945 |
| Flp recombinase transgenic mice of C57BL/6 strain for conditional gene targeting                                                                                   | Tomonori Takeuchi, Takanori Nomura, Mika Tsujita, Misao Suzuki, Toshimitsu Fuse, Hisashi Mori, and Masayoshi Mishina                                 | 953 |
| Preparation of well-defined bovine polyheme-globin based on dimethyl adipimidate and glutaraldehyde cross-linkage                                                  | Tao Hu and Zhiguo Su                                                                                                                                 | 958 |
| Enhanced expression of GTP cyclohydrolase I in V-1-overexpressing PC12D cells                                                                                      | Takahiro Suzuki, Hidehito Inagaki, Tohru Yamakuni, Toshiharu Nagatsu, and Hiroshi Ichinose                                                           | 962 |

|                                                                                                                                         |                                                                                                                                                                                                        |      |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| CYP2D6.10 present in human liver microsomes shows low catalytic activity and thermal stability                                          | Katsunori Nakamura, Noritaka Ariyoshi, Tsuyoshi Yokoi, Satoru Ohgiya, Michihiro Chida, Kazuo Nagashima, Kazuaki Inoue, Takao Kodama, Noriaki Shimada, and Tetsuya Kamataki                             | 969  |
| Arachidonic acid increases intracellular calcium in erythrocytes                                                                        | Laura Soldati, Cinzia Lombardi, Donatella Adamo, Annalisa Terranegra, Cristiana Bianchin, Giuseppe Bianchi, and Giuseppe Vezzoli                                                                       | 974  |
| Metabolic responses induced by thrombin in human umbilical vein endothelial cells                                                       | Yi Fan, Da-Zheng Wu, Yan-Qing Gong, Ren Xu, and Zhi-Bi Hu                                                                                                                                              | 979  |
| Ubiquitin-like proteins and Rpn10 play cooperative roles in ubiquitin-dependent proteolysis                                             | Yasushi Saeki, Aki Saitoh, Akio Toh-e, and Hideyoshi Yokosawa                                                                                                                                          | 986  |
| Subgenomic replicon derived from a cell line infected with the hepatitis C virus                                                        | Hiroe Kishine, Kazuo Sugiyama, Makoto Hijikata, Nobuyuki Kato, Hitoshi Takahashi, Takeshi Noshi, Yasunori Nio, Masahiro Hosaka, Yusuke Miyanari, and Kunitada Shimotohno                               | 993  |
| ERK1/2 mediates PDGF-BB-stimulated vascular smooth muscle cell proliferation and migration on laminin-5                                 | K. Kingsley, J.L. Huff, W.L. Rust, K. Carroll, A.M. Martinez, M. Fitchmun, and G.E. Plopper                                                                                                            | 1000 |
| Remnant lipoprotein particles are taken up into myocardium through VLDL receptor—a possible mechanism for cardiac fatty acid metabolism | Akihisa Kamataki, Sadao Takahashi, Katsuhiko Masamura, Tadao Iwasaki, Hiroaki Hattori, Hironobu Naiki, Kazuya Yamada, Jinya Suzuki, Isamu Miyamori, Juro Sakai, Takahiro Fujino, and Tokuo T. Yamamoto | 1007 |
| NMR evidence for different conformations of the bioactive region of rat CCK-8 and CCK-58                                                | David A. Keire, Travis E. Solomon, and Joseph R. Reeve, Jr.                                                                                                                                            | 1014 |
| Rapamycin partially prevents insulin resistance induced by chronic insulin treatment                                                    | Cathleen E. Berg, Brian E. Lavan, and Cristina M. Rondinone                                                                                                                                            | 1021 |
| Ceramide promotes the death of human cervical tumor cells in the absence of biochemical and morphological markers of apoptosis          | Rebeca López-Marure, Gisela Gutiérrez, Criselda Mendoza, José Luis Ventura, Luis Sánchez, Elba Reyes Maldonado, Alejandro Zentella, and Luis Felipe Montaña                                            | 1028 |
| SPAP2, an Ig family receptor containing both ITIMs and ITAMs                                                                            | Ming-jiang Xu, Runxiang Zhao, Hongxi Cao, and Zhizhuang Joe Zhao                                                                                                                                       | 1037 |
| Protein Ser/Thr phosphatases PPEF interact with calmodulin                                                                              | Mikhail A. Kutuzov, Olga V. Solov'eva, Alexandra V. Andreeva, and Nelly Bennett                                                                                                                        | 1047 |

|                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                               |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Conformational and molecular modeling studies of sulfated cholecystokinin-15                                                                                                                                                                                   | <b>Craig Giragossian, Shane Stone, Anna Maria Papini, Luis Moroder, and Dale F. Mierke</b>                                                                                                                                                                                                                                    | <b>1053</b> |
| Intracellular membrane trafficking pathways in bone-resorbing osteoclasts revealed by cloning and subcellular localization studies of small GTP-binding rab proteins                                                                                           | <b>Haibo Zhao, Otto Ettala, and H. Kalervo Väänänen</b>                                                                                                                                                                                                                                                                       | <b>1060</b> |
| Identification of a KRAB-containing zinc finger protein, ZNF304, by AU-motif-directed display method and initial characterization in lymphocyte activation                                                                                                     | <b>Lidia Sabater, Yaqoub Ashhab, Pepi Caro, Edgardo C. Kolkowski, Ricardo Pujol-Borrell, and Orlando Domínguez</b>                                                                                                                                                                                                            | <b>1066</b> |
| Detection of anti-elongation factor 2 kinase (calmodulin-dependent protein kinase III) antibodies in patients with systemic lupus erythematosus                                                                                                                | <b>Sonia Arora, Jin-Ming Yang, Joseph Craft, and William Hait</b>                                                                                                                                                                                                                                                             | <b>1073</b> |
| Hepatobiliary excretion of biliverdin isomers and C10-substituted biliverdins in Mrp2-deficient (TR <sup>-</sup> ) rats                                                                                                                                        | <b>Antony F. McDonagh, David A. Lightner, Ari K. Kar, and Wilma S. Norona</b>                                                                                                                                                                                                                                                 | <b>1077</b> |
| Reconstitution of cleavage of human immunodeficiency virus type-1 (HIV-1) RNAs                                                                                                                                                                                 | <b>Hidehiro Takahashi, Hirofumi Sawa, Hideki Hasegawa, Tetsutaro Sata, William W. Hall, Kazuo Nagashima, and Takeshi Kurata</b>                                                                                                                                                                                               | <b>1084</b> |
| Both myo-inositol to chiro-inositol epimerase activities and chiro-inositol to myo-inositol ratios are decreased in tissues of GK type 2 diabetic rats compared to Wistar controls                                                                             | <b>Tie-hua Sun, Douglas B. Heimark, Thang Nguyen, Jerry L. Nadler, and Joseph Larner</b>                                                                                                                                                                                                                                      | <b>1092</b> |
| E-selectin modulates the malignant properties of T84 colon carcinoma cells                                                                                                                                                                                     | <b>A.M. Flugy, M. D'Amato, D. Russo, M.A. Di Bella, G. Alaimo, E.C. Kohn, G. De Leo, and R. Alessandro</b>                                                                                                                                                                                                                    | <b>1099</b> |
| Acid-labile formylation of amino terminal proline of human immunodeficiency virus type 1 p24 <sup>gag</sup> was found by proteomics using two-dimensional gel electrophoresis and matrix-assisted laser desorption/ionization-time-of-flight mass spectrometry | <b>Takashi Fuchigami, Shogo Misumi, Nobutoki Takamune, Ichiro Takahashi, Michiho Takama, and Shozo Shoji</b>                                                                                                                                                                                                                  | <b>1107</b> |
| Daily melatonin supplementation in mice increases atherosclerosis in proximal aorta                                                                                                                                                                            | <b>Anne Tailleux, Gérard Torpier, Dominique Bonnefont-Rousselot, Sophie Lestavel, Mohamed Lemdani, Bernadette Caudeville, Christophe Furman, Rachel Foricher, Monique Gardes-Albert, Daniel Lesieur, Christian Rolando, Elisabeth Teissier, Jean-Charles Fruchart, Véronique Clavey, Catherine Fievet, and Patrick Duriez</b> | <b>1114</b> |



|                                                                                                                |                                                                                                                                               |      |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------|
| A role of EphB4 receptor and its ligand, ephrin-B2, in erythropoiesis                                          | Souichi Suenobu, Nobuyuki Takakura, Tomohisa Inada, Yoshihiro Yamada, Hiromi Yuasa, Xiu-Qin Zhang, Seiji Sakano, Yuichi Oike, and Toshio Suda | 1124 |
| An essential role for REV3 in mammalian cell survival: absence of REV3 induces p53-independent embryonic death | Jiyang O-Wang, Kagemasa Kajiwaru, Kiyoko Kawamura, Minoru Kimura, Hiro Miyagishima, Haruhiko Koseki, and Masatoshi Tagawa                     | 1132 |
| Leptin receptors, NPY, and tyrosine hydroxylase in autonomic neurons supplying fat depots in a pig             | K. Czaja, M. Lakomy, J. Kaleczyc, C.R. Barb, G.B. Rampacek, and R.R. Kraeling                                                                 | 1138 |

Number 4, May 17, 2002

**BREAKTHROUGHS AND VIEWS**

|                                                              |                                                                   |      |
|--------------------------------------------------------------|-------------------------------------------------------------------|------|
| The role of uncoupling proteins in pathophysiological states | Josep M. Argilés, Sílvia Busquets, and Francisco J. López-Soriano | 1145 |
|--------------------------------------------------------------|-------------------------------------------------------------------|------|

**REGULAR ARTICLES**

|                                                                                                                                                                              |                                                                                                                   |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------|
| Viral fusion peptides and identification of membrane-interacting segments                                                                                                    | Victoria Dominguez Del Angel, Franck Dupuis, Jean-Paul Mornon, and Isabelle Callebaut                             | 1153 |
| Identification of novel putative membrane proteins selectively expressed during adipose conversion of 3T3-L1 cells                                                           | Aimin Xu, Kai-Luk Choi, Yu Wang, Paska A. Permana, Lance Yi Xu, Clifton Bogardus, and Garth J.S. Cooper           | 1161 |
| Extracellular acidification parallels insulin secretion in INS-1 and HIT-T15 $\beta$ -cell lines                                                                             | Douglas B. Luckie, John H. Wilterding, Joseph J. Maleszewski, Errett C. Hobbs, and L. Karl Olson                  | 1168 |
| FGF-2 and TPA induce matrix metalloproteinase-9 secretion in MCF-7 cells through PKC activation of the Ras/ERK pathway                                                       | Jian-Feng Liu, Michel Crépin, Jian-Miao Liu, Denis Barritault, and Dominique Ledoux                               | 1174 |
| Formation of MUC1 metabolic complex is conserved in tumor-derived and normal epithelial cells                                                                                | JoAnne Julian and Daniel D. Carson                                                                                | 1183 |
| Human serum and glucocorticoid-inducible kinase-like kinase (SGKL) phosphorylates glycogen synthase kinase 3 $\beta$ (GSK-3 $\beta$ ) at serine-9 through direct interaction | Fangyan Dai, Long Yu, Hua He, Yongjing Chen, Jianqiang Yu, Yumei Yang, YueFang Xu, Wenhai Ling, and Shouyuan Zhao | 1191 |
| Mechanism of membrane depolarization caused by the Alzheimer A $\beta$ 1-42 peptide                                                                                          | Barbara J. Blanchard, Veena L. Thomas, and Vernon M. Ingram                                                       | 1197 |
| Eliminating membrane depolarization caused by the Alzheimer peptide A $\beta$ (1-42, aggr.)                                                                                  | Barbara J. Blanchard, Brent R. Stockwell, and Vernon M. Ingram                                                    | 1204 |

|                                                                                                                                                                         |                                                                                                                                                                           |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Plant pre-mRNA splicing in fission yeast,<br><i>Schizosaccharomyces pombe</i>                                                                                           | Bhaskarjyoti Sarmah,<br>Niranjan Chakraborty,<br>Subhra Chakraborty, and Asis Datta                                                                                       | 1209 |
| Gene regulation by human orthologs of<br><i>Drosophila</i> heterochromatin protein 1                                                                                    | Kyu-Kye Hwang and Howard J. Worman                                                                                                                                        | 1217 |
| The motilin pharmacophore in CHO cells<br>expressing the human motilin receptor                                                                                         | Leen Thielemans, Inge Depoortere,<br>Jozef Vanden Broeck, and Theo L. Peeters                                                                                             | 1223 |
| BACE1 interacts with nicastrin                                                                                                                                          | Chinatsu Hattori, Masashi Asai, Yoko Oma,<br>Yoshihiro Kino, Noboru Sasagawa,<br>Takaomi C. Saido, Kei Maruyama,<br>and Shoichi Ishiura                                   | 1228 |
| Mutagenesis and peptide analysis of the DRY<br>motif in the $\alpha 2A$ adrenergic receptor: evidence<br>for alternate mechanisms in G protein-coupled<br>receptors     | Duane A. Chung, Susan M. Wade,<br>Carol B. Fowler, Danielle D. Woods,<br>Paolo B. Abada, Henry I. Mosberg,<br>and Richard R. Neubig                                       | 1233 |
| Identification of nuclear import and export<br>signals within the structure of the zinc finger<br>protein TIS11                                                         | Tomiyasu Murata, Yumi Yoshino,<br>Noriyoshi Morita, and Norio Kaneda                                                                                                      | 1242 |
| H <sub>2</sub> O <sub>2</sub> -induced AP-1 activation and its effect on<br>p21 <sup>WAF1/CIP1</sup> -mediated G2/M arrest in a<br>p53-deficient human lung cancer cell | Youn Wook Chung, Dae-won Jeong,<br>Joo Yun Won, Eui-Ju Choi,<br>Yung Hyun Choi, and Ick Young Kim                                                                         | 1248 |
| Analysis of gene expression patterns<br>during glucocorticoid-induced apoptosis<br>using oligonucleotide arrays                                                         | Ning Lu Yoshida, Toshiyuki Miyashita,<br>Mami U, Masao Yamada, John C. Reed,<br>Yuji Sugita, and Tadahilo Oshida                                                          | 1254 |
| Immunohistochemical colocalization of Yellow<br>and male-specific Fruitless in <i>Drosophila</i><br><i>melanogaster</i> neuroblasts                                     | Anna Radovic, Patricia J. Wittkopp,<br>Anthony D. Long, and Mark David Drapeau                                                                                            | 1262 |
| Micro-dystrophin cDNA ameliorates<br>dystrophic phenotypes when introduced<br>into <i>mdx</i> mice as a transgene                                                       | Miki Sakamoto, Katsutoshi Yuasa,<br>Madoka Yoshimura, Toshifumi Yokota,<br>Takaaki Ikemoto, Misao Suzuki,<br>George Dickson, Yuko Miyagoe-Suzuki,<br>and Shin'ichi Takeda | 1265 |
| A new multidrug resistance protein at the<br>blood-brain barrier                                                                                                        | Tanja Eisenblätter<br>and Hans-Joachim Galla                                                                                                                              | 1273 |
| The effect of TGF- $\beta$ receptor binding peptides<br>on smooth muscle cells                                                                                          | Ingrid N. Michon, Louis C. Penning,<br>Tom J.M. Molenaar, Theo J.C. van Berkel,<br>Erik A.L. Biessen, and Johan Kuiper                                                    | 1279 |
| Identification of genes responsive to sodium<br>butyrate in colonic epithelial cells                                                                                    | Yoshiaki Tabuchi, Yuko Arai,<br>Takashi Kondo, Noriaki Takeguchi,<br>and Shinji Asano                                                                                     | 1287 |
| Characterization of CeHDA-7, a class II<br>histone deacetylase interacting with MEF-2<br>in <i>Caenorhabditis elegans</i>                                               | Kyu Yeong Choi, Yon Ju Ji,<br>Changhoon Jee, Do Han Kim,<br>and Joohong Ahnn                                                                                              | 1295 |
| Pseudorabies virus DNA-binding protein<br>stimulates the exonuclease activity and<br>regulates the processivity of pseudorabies<br>virus DNase                          | Chien-Yun Hsiang                                                                                                                                                          | 1301 |

Number 5, May 24, 2002

## BREAKTHROUGHS AND VIEWS

- $\alpha$ -Tocopheryl succinate epitomizes a compound with a shift in biological activity due to pro-vitamin-to-vitamin conversion **Jiri Neuzil** 1309

## REGULAR ARTICLES

- ASC, which is composed of a PYD and a CARD, is up-regulated by inflammation and apoptosis in human neutrophils **Masaaki Shiohara, Shun'ichiro Taniguchi, Junya Masumoto, Kozo Yasui, Kenichi Koike, Atsushi Komiyama, and Junji Sagara** 1314
- Interaction of Btk and Akt in B cell signaling **Jessica Lindvall and Tahmina C. Islam** 1319
- Oxidized low density lipoprotein induces the cyclin-dependent kinase inhibitor p21<sup>waf1</sup> and the tumor suppressor Rb **Cécile Mazière, Virginie Marcheux, Christophe Louandre, and Jean-Claude Mazière** 1327
- Different regulation of the LXR $\alpha$  promoter activity by isoforms of CCAAT/enhancer-binding proteins **Knut R. Steffensen, Gertrud U. Schuster, Paolo Parini, Elin Holter, Christine M. Sadek, Tobias Cassel, Winnie Eskild, and Jan-Åke Gustafsson** 1333
- Selective binding of trisamine-modified phosphorothioate antisense DNA to target mRNA improves antisense activity and reduces toxicity **Makoto Matsukura, Tsuyosi Okamoto, Teruhisa Miike, Hiroaki Sawai, and Kazuo Shinozuka** 1341
- Some human B and T cell epitopes of bovine serum albumin, the major beef allergen **Soichi Tanabe, Yoko Kobayashi, Yoshihisa Takahata, Fumiki Morimatsu, Rumiko Shibata, and Toshihide Nishimura** 1348
- Esterification of the propionate groups promotes  $\alpha/\beta$  hemoglobin chain homogeneity of CN-hemin binding **Therese M. Jennings and Melisenda J. McDonald** 1354
- Platelet-activating factor (PAF) activates casein kinase 2 in the protozoan parasite *Herpetomonas muscarum muscarum* **Mário A.C. Silva-Neto, Alan B. Carneiro, Danielle P. Vieira, Rafael D. Mesquita, and Angela H.C.S. Lopes** 1358
- Establishment of a monoclonal antibody against human Toll-like receptor 3 that blocks double-stranded RNA-mediated signaling **Misako Matsumoto, Satomi Kikkawa, Masayoshi Kohase, Kensuke Miyake, and Tsukasa Seya** 1364
- Inhibitors of antibiotic efflux pump in resistant *Enterobacter aerogenes* strains **Monique Mallaé, Jacqueline Chevalier, Annie Eyraud, and Jean-Marie Pagès** 1370
- Characterization of the chondroitin sulfates in wild type *Caenorhabditis elegans* **Carla Beeber and Fred J. Kieras** 1374



|                                                                                                                           |                                                                                                                                                                               |      |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Cardiac ankyrin repeat protein, a negative regulator of cardiac gene expression, is augmented in human heart failure      | Oliver Zolk, Marcus Frohme, Alexander Maurer, Franz-Werner Kluxen, Bernd Hentsch, Dimitri Zubakov, Jörg D. Hoheisel, Irving H. Zucker, Salvatore Pepe, and Thomas Eschenhagen | 1377 |
| Activation of Ras cascade increases the mitochondrial enzyme content of respiratory competent yeast                       | Laurent Dejean, Bertrand Beauvoit, Odile Bunoust, Bernard Guérin, and Michel Rigoulet                                                                                         | 1383 |
| Hsc62, Hsc56, and GrpE, the third Hsp70 chaperone system of <i>Escherichia coli</i>                                       | Kazuaki Yoshimune, Tohru Yoshimura, Toru Nakayama, Tokuzo Nishino, and Nobuyoshi Esaki                                                                                        | 1389 |
| CARP is a novel caspase recruitment domain containing pro-apoptotic protein                                               | Baohua Liu, Yuqing Liu, Jingzhou Chen, Zhun Wei, Hui Yu, Yisong Zhen, Lihe Lu, and Rutai Hui                                                                                  | 1396 |
| Mice with cardiac-specific sequestration of the $\beta$ -subunit of the L-type calcium channel                            | Vladimir Serikov, Ilona Bodi, Sheryl E. Koch, James N. Muth, Gabor Mikala, Sergey G. Martinov, Hannelore Haase, and Arnold Schwartz                                           | 1405 |
| Dissection of promoter control modules that direct Bmp4 expression in the epithelium-derived components of hair follicles | Jianghong Zhang, Xiaoyu Tan, Christopher H. Contag, Yongbo Lu, Dayong Guo, Stephen E. Harris, and Jian Q. Feng                                                                | 1412 |
| Differentiation of liver epithelial (stem-like) cells into hepatocytes induced by coculture with hepatic stellate cells   | Hirokazu Nagai, Kunihiro Terada, Go Watanabe, Yasuharu Ueno, Namiko Aiba, Tomomi Shibuya, Masami Kawagoe, Takashi Kameda, Mitsuru Sato, Haruki Senoo, and Toshihiro Sugiyama  | 1420 |
| Identification and genetic analysis of human and mouse activated Cdc42 interacting protein-4 isoforms                     | Lin Wang, William A. Rudert, Anatoly Grishin, Patrice Dombrosky-Ferlan, Kevin Sullivan, Xiaoying Deng, David Whitcomb, and Seth Corey                                         | 1426 |
| PPAR activators inhibit endothelial cell migration by targeting Akt                                                       | Stephan Goetze, Friedrich Eilers, Anne Bungenstock, Ulrich Kintscher, Philipp Stawowy, Florian Blaschke, Kristof Graf, Ronald E. Law, Eckart Fleck, and Michael Gräfe         | 1431 |
| Inhibition of cGMP-dependent protein kinase II by its own splice isoform                                                  | Stepan Gambaryan, Alois Palmethofer, Margarita Glazova, Albert Smolenski, Gunnar Ingi Kristjansson, Michael Zimmer, and Suzanne M. Lohmann                                    | 1438 |
| Functional GABA <sub>B</sub> receptors expressed in cultured calvarial osteoblasts                                        | Sayumi Fujimori, Eiichi Hinoi, and Yukio Yoneda                                                                                                                               | 1445 |
| Histone cross-linking by transglutaminase                                                                                 | Jae-Hong Kim, Kang Hoon Nam, Oh-Seok Kwon, In Gyu Kim, Michael Bustin, Hyon E. Choy, and Sang Chul Park                                                                       | 1453 |

|                                                                                                                                                                                  |                                                                                                                                                            |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Quercetin glucuronide prevents VSMC hypertrophy by angiotensin II via the inhibition of JNK and AP-1 signaling pathway                                                           | Masanori Yoshizumi, Koichiro Tsuchiya, Yuki Suzaki, Kazuyoshi Kirima, Moe Kyaw, Jae-Hak Moon, Junji Terao, and Toshiaki Tamaki                             | 1458 |
| Oscillatory shear alters endothelial hydraulic conductivity and nitric oxide levels                                                                                              | Mechteld V. Hillsley and John M. Tarbell                                                                                                                   | 1466 |
| Identification and characterization of murine IRAK-M                                                                                                                             | Olaf Rosati and Michael U. Martin                                                                                                                          | 1472 |
| Cytotoxic activity of 2',2'-difluorodeoxycytidine, 5-aza-2'-deoxycytidine and cytosine arabinoside in cells transduced with deoxycytidine kinase gene                            | Christian M. Beauséjour, Jacynthe Gagnon, Mélanie Primeau, and Richard L. Momparker                                                                        | 1478 |
| Brain hydrogen sulfide is severely decreased in Alzheimer's disease                                                                                                              | Ko Eto, Takashi Asada, Kunimasa Arima, Takao Makifuchi, and Hideo Kimura                                                                                   | 1485 |
| Low level of mitochondrial deoxyguanosine kinase is the dominant factor in acquired resistance to 9- $\beta$ -D-arabinofuranosylguanine cytotoxicity                             | Kourosh Lotfi, Emma Månsson, Curt Peterson, Staffan Eriksson, and Freidoune Albertioni                                                                     | 1489 |
| The proteolytic release of genotoxins from cooked beef                                                                                                                           | Francis L. Martin, Kathleen J. Cole, David H. Phillips, and Philip L. Grover                                                                               | 1497 |
| Cytotoxic and cytostatic effects induced by 4-hydroxynonenal in human osteosarcoma cells                                                                                         | N. Calonghi, C. Boga, C. Cappadone, E. Pagnotta, C. Bertucci, J. Fiori, and L. Masotti                                                                     | 1502 |
| The catalytic subunits of I $\kappa$ B kinase, IKK-1 and IKK-2, contain non-equivalent active sites when expressed as homodimers                                                 | James R. Burke and Joann Strnad                                                                                                                            | 1508 |
| Purification, structure-function analysis, and molecular characterization of novel linear peptides from scorpion <i>Opisthacanthus madagascariensis</i>                          | Li Dai, Gerardo Corzo, Hideo Naoki, Marta Andriantsiferana, and Terumi Nakajima                                                                            | 1514 |
| A novel <i>pex2</i> mutant: catalase-deficient but temperature-sensitive PTS1 and PTS2 import                                                                                    | Noriko Akiyama, Kamran Ghaedi, and Yukio Fujiki                                                                                                            | 1523 |
| Successful genetic transduction in vivo into synovium by means of electroporation                                                                                                | Suzuyo Ohashi, Toshikazu Kubo, Tsunao Kishida, Takumi Ikeda, Kenji Takahashi, Yuji Arai, Ryu Terauchi, Hidetsugu Asada, Jiro Imanishi, and Osam Mazda      | 1530 |
| NMDA receptor stimulation induces temporary $\alpha$ -tubulin degradation signaled by nitric oxide-mediated tyrosine nitration in the nervous system of <i>Sepia officinalis</i> | Anna Palumbo, Gabriella Fiore, Carlo Di Cristo, Anna Di Cosmo, and Marco d'Ischia                                                                          | 1536 |
| RCAS1 is associated with ductal breast cancer progression                                                                                                                        | Joel Rousseau, Bernard Têtu, Danielle Caron, Patrick Malenfant, Paola Cattaruzzi, Marie Audette, Charles Doillon, Jacques P. Tremblay, and Benoit Guérette | 1544 |

|                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                  |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------|
| Visualization and force measurement of branching by Arp2/3 complex and N-WASP in actin filament                                                                                                                                                                                                                                                                                                  | <b>Ikuko Fujiwara, Shiro Suetsugu, Sotaro Uemura, Tadaomi Takenawa, and Shin'ichi Ishiwata</b>                                   | <b>1550</b> |
| The novel type I serine–threonine kinase receptor Alk8 binds TGF- $\beta$ in the presence of TGF- $\beta$ RII                                                                                                                                                                                                                                                                                    | <b>Mark P. de Caestecker, Martyn Bottomley, Sucharita Bhattacharyya, Tracie L. Payne, Anita B. Roberts, and Pamela C. Yelick</b> | <b>1556</b> |
| Identification of oxidized plasma proteins in Alzheimer's disease                                                                                                                                                                                                                                                                                                                                | <b>Joungil Choi, Christina A. Malakowsky, John M. Talent, Craig C. Conrad, and Robert W. Gracy</b>                               | <b>1566</b> |
| Relationship between p38 mitogen-activated protein kinase and small GTPase Rac for the activation of NADPH oxidase in bovine neutrophils                                                                                                                                                                                                                                                         | <b>Tohru Yamamori, Osamu Inanami, Hideki Sumimoto, Takashi Akasaki, Hajime Nagahata, and Mikinori Kuwabara</b>                   | <b>1571</b> |
| <b>ERRATA</b>                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                  |             |
| Volume <b>291</b> , Number 5 (2002), in the article "Deficiency of $\alpha$ -dystroglycan in muscle–eye–brain disease" by Hiroki Kano, Kazuhiro Kobayashi, Ralf Herrmann, Masaji Tachikawa, Hiroshi Manya, Ichizo Nishino, Ikuya Nonaka, Volker Straub, Beril Talim, Thomas Voit, Haluk Topaloglu, Tamao Endo, Hideki Yoshikawa, and Tatsushi Toda, pages 1283–1286 (doi:10.1006/bbrc.2002.6608) |                                                                                                                                  | <b>1579</b> |
| Volume <b>290</b> , Number 5 (2002), in the article "Identification of G-proteins coupling to the vasoactive intestinal peptide receptor VPAC <sub>1</sub> using immunoaffinity chromatography: evidence for precoupling" by S. Martin Shreeve, pages 1300–1307 (doi:10.1006/bbrc.2002.6342)                                                                                                     |                                                                                                                                  | <b>1580</b> |
| Author Index for Volume 293                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                  | <b>1581</b> |



**Volume 294, Number 1, May 31, 2002**

**BREAKTHROUGHS AND VIEWS**

- |                                                                                                                                |                                     |   |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---|
| Dipeptidyl peptidase IV inhibition as an approach to the treatment and prevention of type 2 diabetes: a historical perspective | Carolyn F. Deacon and Jens J. Holst | 1 |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---|

**REGULAR ARTICLES**

- |                                                                                                                                                     |                                                                                                                                                  |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Synthesis, aggregation, neurotoxicity, and secondary structure of various A $\beta$ 1–42 mutants of familial Alzheimer's disease at positions 21–23 | Kazuma Murakami, Kazuhiro Irie, Akira Morimoto, Hajime Ohigashi, Mayumi Shindo, Masaya Nagao, Takahiko Shimizu, and Takuji Shirasawa             | 5  |
| Luteinizing hormone-releasing hormone induces JunD–DNA binding and extends cell cycle in human ovarian cancer cells                                 | Andreas R. Günthert, Carsten Gründker, Kirsten Hollmann, and Günter Emons                                                                        | 11 |
| NS3 protease of Langkat tick-borne flavivirus cleaves serine protease substrates                                                                    | Natale Scaramozzino, Jean-Marc Crance, Christian Drouet, Jean-Philippe Roebuck, Emmanuel Drouet, Alain Jouan, and Daniel Garin                   | 16 |
| A complex containing PBX2 contributes to activation of the proto-oncogene <i>HOX11</i>                                                              | R.L. Brake, U.R. Kees, and P.M. Watt                                                                                                             | 23 |
| Dimerization of v-erbA on inverted repeats                                                                                                          | Inna Zubkova and Jose S. Subauste                                                                                                                | 35 |
| The inhibitory and facilitatory actions of amyloid- $\beta$ peptides on nicotinic ACh receptors and AMPA receptors                                  | Hidetoshi Tozaki, Akira Matsumoto, Takeshi Kanno, Kaoru Nagai, Tetsu Nagata, Satoshi Yamamoto, and Tomoykui Nishizaki                            | 42 |
| Liver- and lobe-selective gene transfection following the instillation of plasmid DNA to the liver surface in mice                                  | Shigeru Kawakami, Ryu Hirayama, Keiko Shoji, Rie Kawanami, Koyo Nishida, Mikiro Nakashima, Hitoshi Sasaki, Toshiyuki Sakaeda, and Junzo Nakamura | 46 |
| Induction of apoptosis in granulosa cells by TNF $\alpha$ and its attenuation by glucocorticoids involve modulation of Bcl-2                        | Ravid Sasson, Neomi Winder, Salem Kees, and Abraham Amsterdam                                                                                    | 51 |
| Crystallization and preliminary crystallographic analysis of manganese superoxide dismutase from <i>Bacillus halodenitrificans</i>                  | Jun Liao, Mei Li, Ming-Yih Liu, Tschining Chang, Jean Le Gall, Lu-Lu Gui, Ji-Ping Zhang, Dong-Cai Liang, and Wen-Rui Chang                       | 60 |
| Induction of murine H-rev107 gene expression by growth arrest and histone acetylation: involvement of an Sp1/Sp3-binding GC-box                     | Karim Roder, Kee-Hong Kim, and Hei Sook Sul                                                                                                      | 63 |
| Isoprene synthase activity parallels fluctuations of isoprene release during growth of <i>Bacillus subtilis</i>                                     | Tami L. Sivy, Megan C. Shirk, and Ray Fall                                                                                                       | 71 |

|                                                                                                                                                           |                                                                                                                                                                                           |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| A bacterial flavin reductase system reduces chromate to a soluble chromium(III)-NAD <sup>+</sup> complex                                                  | <b>Geoffrey J. Puzon, James N. Petersen, Arthur G. Roberts, David M. Kramer, and Luying Xun</b>                                                                                           | <b>76</b>  |
| Module fusion in an A-type flavoprotein from the cyanobacterium <i>Synechocystis</i> condenses a multiple-component pathway in a single polypeptide chain | <b>João B. Vicente, Cláudio M. Gomes, Alain Wasserfallen, and Miguel Teixeira</b>                                                                                                         | <b>82</b>  |
| Deficiency in sPLA <sub>2</sub> does not affect HDL levels or atherosclerosis in mice                                                                     | <b>Charlotte A. Burton, Sushma Patel, Steven Mundt, Heide Hassing, Donghui Zhang, Anne Hermanowski-Vosatka, Samuel D. Wright, Yu-Sheng Chao, Patricia A. Detmers, and Carl P. Sparrow</b> | <b>88</b>  |
| Gender differences in steroid modulation of angiotensin II-induced protein kinase C activity in anterior pituitary of the rat                             | <b>Agnieszka Lachowicz and Elżbieta Rębas</b>                                                                                                                                             | <b>95</b>  |
| Benzo(a)pyrene, but not 2,3,7,8-tetrachloro-dibenzo- <i>p</i> -dioxin, alters cell adhesion proteins in human uterine RL95-2 cells                        | <b>Michelle A. McGarry, Grantley D. Charles, Theresa Medrano, Michael R. Bubbs, Maria B. Grant, Martha Campbell-Thompson, and Kathleen T. Shiverick</b>                                   | <b>101</b> |
| NBT-II carcinoma behaviour is not dependent on cell-cell communication through gap junctions                                                              | <b>F. Lesueur, M. Mesnil, A. Delouvée, J.M. Girault, H. Yamasaki, J.P. Thiery, and J. Jouanneau</b>                                                                                       | <b>108</b> |
| Cellular localisation of a water-soluble fullerene derivative                                                                                             | <b>Sarah Foley, Colin Crowley, Monique Smaïhi, Claude Bonfils, Bernard F. Erlanger, Patrick Seta, and Christian Larroque</b>                                                              | <b>116</b> |
| The APC regulator CDH1 is essential for the progression of embryonic cell cycles in <i>Xenopus</i>                                                        | <b>Yuan Zhou, Yick-Pang Ching, Raymond W.M. Ng, and Dong-Yan Jin</b>                                                                                                                      | <b>120</b> |
| Differential localisation of nPKCδ during cell cycle progression                                                                                          | <b>Carla Perego, Danilo Porro, and Caterina A.M. La Porta</b>                                                                                                                             | <b>127</b> |
| Propionic acid side chain hydrogen bonding in the malaria pigment β-hematin                                                                               | <b>D. Scott Bohle, Andrew D. Kosar, and Sara K. Madsen</b>                                                                                                                                | <b>132</b> |
| Cloning and characterization of a testis and brain-specific isoform of mouse 3'-phosphoinositide-dependent protein kinase-1, mPDK-1β                      | <b>Lily Q. Dong, Fresnida J. Ramos, Michael J. Wick, Mei Ann Lim, Zhongmao Guo, Randy Strong, Arlan Richardson, and Feng Liu</b>                                                          | <b>136</b> |
| Native transfer RNA catalyzes Diels-Alder reaction                                                                                                        | <b>Michal Mielcarek, Mirosława Z. Barciszewska, Piotr Sałanski, Maciej Stobiecki, Janusz Jurczak, and Jan Barciszewski</b>                                                                | <b>145</b> |
| Growth factors for sequential cellular de- and re-differentiation in tissue engineering                                                                   | <b>M. Pei, J. Seidel, G. Vunjak-Novakovic, and L.E. Freed</b>                                                                                                                             | <b>149</b> |

|                                                                                                                                                 |                                                                                                                                                       |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| The origin of the absorption band induced through the interaction between apotransketolase and thiamin diphosphate                              | <b>Marina V. Kovina, Irina A. Bykova, Olga N. Solovjeva, Ludmilla E. Meshalkina, and German A. Kochetov</b>                                           | <b>155</b> |
| A novel gene IC53 stimulates ECV304 cell proliferation and is upregulated in failing heart                                                      | <b>Jingzhou Chen, Baohua Liu, Yuqing Liu, Yu Han, Hui Yu, Yinhui Zhang, Lihe Lu, Yisong Zhen, and Rutai Hui</b>                                       | <b>161</b> |
| Molecular modeling of flavonoids that inhibits xanthine oxidase                                                                                 | <b>Chun-Mao Lin, Chien-Shu Chen, Chien-Tsu Chen, Yu-Chih Liang, and Jen-Kun Lin</b>                                                                   | <b>167</b> |
| Comparative modelling and immunochemical reactivity of <i>Escherichia coli</i> UMP kinase                                                       | <b>Gilles Labesse, Nadia Bucurenci, Dominique Douguet, Hiroshi Sakamoto, Stéphanie Landais, Cristina Gagyi, Anne-Marie Gilles, and Octavian Bârzu</b> | <b>173</b> |
| The design, synthesis, and biochemical evaluation of derivatives of biphenyl sulfamate-based compounds as novel inhibitors of estrone sulfatase | <b>Sabbir Ahmed, Karen James, and Caroline P. Owen</b>                                                                                                | <b>180</b> |
| Domain-swapped structure of a mutant of cyanovirin-N                                                                                            | <b>Istvan Botos, Toshiyuki Mori, Laura K. Cartner, Michael R. Boyd, and Alexander Wlodawer</b>                                                        | <b>184</b> |
| Expression, purification, and evidence for the interaction of the two nucleotide-binding folds of the sulphonylurea receptor                    | <b>Emma Hough, Lindsey Mair, William Mackenzie, and Asipu Sivaprasadarao</b>                                                                          | <b>191</b> |

**Number 2, June 7, 2002**

|                                                                                                                                                            |                                                                                                                                                                                       |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| A truncated splice variant of KCNQ1 cloned from rat heart                                                                                                  | <b>Yoichi Yamada, Xiangdong Chen, Takeshi Kobayashi, Yasuhiro Kamada, Masato Nagashima, Masaaki Tsutsuura, Sumihiko Seki, Michiaki Yamakage, Akiyoshi Namiki, and Noritsugu Tohse</b> | <b>199</b> |
| Novel missense mutations in red/green opsin genes in congenital color-vision deficiencies                                                                  | <b>Hisao Ueyama, Shigeki Kuwayama, Hiroo Imai, Shoko Tanabe, Sanae Oda, Yasuhiro Nishida, Akimori Wada, Yoshinori Shichida, and Shinichi Yamade</b>                                   | <b>205</b> |
| Amphipathic helical behavior of the third repeat fragment in the tau microtubule-binding domain, studied by <sup>1</sup> H NMR spectroscopy                | <b>Katsuhiko Minoura, Koji Tomoo, Toshimasa Ishida, Hiroshi Hasegawa, Masahiro Sasaki, and Taizo Taniguchi</b>                                                                        | <b>210</b> |
| Leptin induces IL-1 receptor antagonist expression in the brain                                                                                            | <b>Toru Hosoi, Yasunobu Okuma, and Yasuyuki Nomura</b>                                                                                                                                | <b>215</b> |
| Disruption in gastric mucin synthesis by <i>Helicobacter pylori</i> lipopolysaccharide involves ERK and p38 mitogen-activated protein kinase participation | <b>Bronislaw L. Slomiany and Amalia Slomiany</b>                                                                                                                                      | <b>220</b> |



|                                                                                                                                                                                                                                   |                                                                                                                                                                                                                 |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Macrophage migration inhibitory factor in drug-induced liver injury: a role in susceptibility and stress responsiveness                                                                                                           | Mohammed Bourdi, Timothy P. Reilly, Abdel G. Elkahloun, John W. George, and Lance R. Pohl                                                                                                                       | 225 |
| Functional analysis of aortic endothelial cells expressing mutant PDGF receptors with respect to expression of matrix metalloproteinase-3                                                                                         | Tatsuro Kanaki, Hideaki Bujo, Seiji Mori, Zhu Yanjuan, Kazuo Takahashi, Koutaro Yokote, Nobuhiro Morisaki, and Yasushi Saito                                                                                    | 231 |
| Overexpression of glia maturation factor in astrocytes leads to immune activation of microglia through secretion of granulocyte-macrophage-colony stimulating factor                                                              | Asgar Zaheer, Satya N. Mathur, and Ramon Lim                                                                                                                                                                    | 238 |
| A role for mitochondria as potential regulators of cellular life span                                                                                                                                                             | Dong Xu and Toren Finkel                                                                                                                                                                                        | 245 |
| Ca <sup>2+</sup> signals in Pmr1-GFP-expressing COS-1 cells with functional endoplasmic reticulum                                                                                                                                 | Ludwig Missiaen, Jo Vanoevelen, Kristel Van Acker, Luc Raeymaekers, Jan B. Parys, Geert Callewaert, Frank Wuytack, and Humbert De Smedt                                                                         | 249 |
| Dominant-negative mutant of BIG2, an ARF-guanine nucleotide exchange factor, specifically affects membrane trafficking from the <i>trans</i> -Golgi network through inhibiting membrane association of AP-1 and GGA coat proteins | Chisa Shinotsuka, Satoshi Waguri, Masaki Wakasugi, Yasuo Uchiyama, and Kazuhisa Nakayama                                                                                                                        | 254 |
| Distribution of dynamins in testis and their possible relation to spermatogenesis                                                                                                                                                 | Akihiro Kamitani, Hiroshi Yamada, Masahiro Kinuta, Masami Watanabe, Shun-Ai Li, Takashi Matsukawa, Mark McNiven, Hiromi Kumon, and Kohji Takei                                                                  | 261 |
| PQBP-1 increases vulnerability to low potassium stress and represses transcription in primary cerebellar neurons                                                                                                                  | Y. Enokido, H. Maruoka, H. Hatanaka, I. Kanazawa, and H. Okazawa                                                                                                                                                | 268 |
| Interaction of the C-terminal region of the rat serotonin transporter with MacMARCKS modulates 5-HT uptake regulation by protein kinase C                                                                                         | Urda Jess, Oussama El Far, Joachim Kirsch, and Heinrich Betz                                                                                                                                                    | 272 |
| Follicular dendritic cell of the knock-in mouse provides a new bioassay for human prions                                                                                                                                          | Tetsuyuki Kitamoto, Shirou Mohri, James W. Ironside, Ichiro Miyoshi, Tomoyuki Tanaka, Noritoshi Kitamoto, Shigeyoshi Itohara, Noriyuki Kasai, Motoya Katsuki, Jun Higuchi, Tamaki Muramoto, and Ryong-Woon Shin | 280 |
| The nuclear function of angiogenin in endothelial cells is related to rRNA production                                                                                                                                             | Zheng-ping Xu, Takanori Tsuji, James F. Riordan, and Guo-fu Hu                                                                                                                                                  | 287 |
| Direct phosphorylation of focal adhesion kinase by <i>c-src</i> : evidence using a modified nucleotide pocket kinase and ATP analog                                                                                               | Anu Chaudhary, Joan S. Brugge, and Jonathan A. Cooper                                                                                                                                                           | 293 |

|                                                                                                                                   |                                                                                                                                                                                                       |            |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Fasting activates the gene expression of UCP3 independent of genes necessary for lipid transport and oxidation in skeletal muscle | <b>Rebecca J. Tunstall, Kate A. Mehan, Mark Hargreaves, Lawrence L. Spriet, and David Cameron-Smith</b>                                                                                               | <b>301</b> |
| Only amyloidogenic intermediates of transthyretin induce apoptosis                                                                | <b>Karin Andersson, Anders Olofsson, Ellen Holm Nielsen, Sven-Erik Svehag, and Erik Lundgren</b>                                                                                                      | <b>309</b> |
| The adrenomedullin receptor acts as clearance receptor in pulmonary circulation                                                   | <b>Thomas Dschietzig, Hamid Adib Azad, Louay Asswad, Claudia Böhme, Cornelia Bartsch, Gert Baumann, and Karl Stangl</b>                                                                               | <b>315</b> |
| Regulation of Smad3 expression in bleomycin-induced pulmonary fibrosis: a negative feedback loop of TGF- $\beta$ signaling        | <b>Yun Zhao and Dawn A. Geverd</b>                                                                                                                                                                    | <b>319</b> |
| Characterisation of the phosphorylation of $\beta$ -catenin at the GSK-3 priming site Ser45                                       | <b>Thilo Hagen and Antonio Vidal-Puig</b>                                                                                                                                                             | <b>324</b> |
| Expression of the RNA binding proteins, Mel-N1, Mel-N2, and Mel-N3 in adipose cells                                               | <b>Chen Qi, James A. Wheeler, Ashlie Pruett, and Phillip H. Pekala</b>                                                                                                                                | <b>329</b> |
| Potent inhibition of DNA unwinding and ATPase activities of pea DNA helicase 45 by DNA-binding agents                             | <b>Xuan Hoi Pham and Narendra Tuteja</b>                                                                                                                                                              | <b>334</b> |
| Increased myocardial expression of RAMP1 and RAMP3 in rats with chronic heart failure                                             | <b>Carine Cueille, Elisabeth Pidoux, Marie-Christine de Vernejoul, Renée Ventura-Clapier, and Jean-Michel Garel</b>                                                                                   | <b>340</b> |
| Validation of a quantitative method for real time PCR kinetics                                                                    | <b>Weihong Liu and David A. Saint</b>                                                                                                                                                                 | <b>347</b> |
| Age-associated reduction of nuclear protein import in human fibroblasts                                                           | <b>Gemma Pujol, Henrik Söderqvist, and Aurelian Radu</b>                                                                                                                                              | <b>354</b> |
| Leukemia inhibitory factor relaxes arteries through endothelium-dependent mechanism                                               | <b>Keizo Kimura, Kazushi Tsuda, Chizu Moriwaki, Tetsuya Kawabe, Masanori Hamada, Masahiro Obana, Akira Baba, Takuzo Hano, and Ichiro Nishio</b>                                                       | <b>359</b> |
| Ceramide accumulation is independent of camptothecin-induced apoptosis in prostate cancer LNCaP cells                             | <b>Yukihiro Akao, Suzuno Kusakabe, Yoshiko Banno, Mariko Kito, Yoshihito Nakagawa, Keiko Tamiya-Koizumi, Masanori Hattori, Motoshi Sawada, Yoshio Hirabayasi, Nobuko Ohishi, and Yoshinori Nozawa</b> | <b>363</b> |
| Neurogenic differentiation of murine and human adipose-derived stromal cells                                                      | <b>Kristine M. Safford, Kevin C. Hicok, Shawn D. Safford, Yuan-Di C. Halvorsen, William O. Wilkison, Jeffrey M. Gimble, and Henry E. Rice</b>                                                         | <b>371</b> |

|                                                                                                                                                                        |                                                                                                                                                                       |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Novel oxazolidinone-based compounds as inhibitors of aromatase and the use of the substrate-heme complex approach in the rationalisation of these compounds            | Sabbir Ahmed, Shaheen Adat, Annabel Murrells, and Caroline P. Owen                                                                                                    | 380 |
| Estrogen regulation of <i>c-fos</i> gene expression through phosphatidylinositol-3-kinase-dependent activation of serum response factor in MCF-7 breast cancer cells   | Renqin Duan, Wen Xie, Xiangrong Li, Andrew McDougal, and Stephen Safe                                                                                                 | 384 |
| Effects of remote mutation on the autolysis of HIV-1 PR: X-ray and NMR investigations                                                                                  | Mukesh Kumar, K.K. Kannan, M.V. Hosur, Neel S. Bhavesh, Amarnath Chatterjee, Rohit Mittal, and R.V. Hosur                                                             | 395 |
| A novel and rapid approach to isolating functional ryanodine receptors                                                                                                 | Duncan J. West, Eileen C.J. Smith, and Alan J. Williams                                                                                                               | 402 |
| Androgen receptor enhances myogenin expression and accelerates differentiation                                                                                         | Dong Kun Lee                                                                                                                                                          | 408 |
| Involvement of IL-1 $\beta$ and IL-10 in IFN- $\alpha$ -mediated antiviral gene induction in human hepatoma cells                                                      | Tatsuki Ichikawa, Kazuhiko Nakao, Keisuke Nakata, Mayumi Yamashita, Keisuke Hamasaki, Masaya Shigeno, Seigou Abiru, Hiroki Ishikawa, Nobuko Ishii, and Katsumi Eguchi | 414 |
| Release of a new vascular permeability enhancing peptide from kininogens by human neutrophil elastase                                                                  | Takahisa Imamura, Sumio Tanase, Izumi Hayashi, Jan Potempa, Andrzej Kozik, and James Travis                                                                           | 423 |
| Ultrastructure of nuclear aggregates formed by expressing an expanded polyglutamine                                                                                    | Noriko Hazeki, Tadashi Tsukamoto, Ikuru Yazawa, Minami Koyama, Shunji Hattori, Iori Someki, Takeshi Iwatsubo, Koichiro Nakamura, Jun Goto, and Ichiro Kanazawa        | 429 |
| Blockade of angiotensin AT1a receptor signaling reduces tumor growth, angiogenesis, and metastasis                                                                     | Mamoru Fujita, Izumi Hayashi, Shohei Yamashina, Moritoshi Itoman, and Masataka Majima                                                                                 | 441 |
| Modulation of alternative pre-mRNA splicing in vivo by pinin                                                                                                           | Ping Wang, Pei-Jen Lou, Steve Leu, and Pin Ouyang                                                                                                                     | 448 |
| <i>pc1</i> and <i>psc1</i> , zebrafish homologs of <i>Drosophila Polycomb</i> and <i>Posterior sex combs</i> , encode nuclear proteins capable of complex interactions | Akinori Kawamura, Shin'ichiro Yokota, Kouji Yamada, Hitoshi Inoue, Keiji Inohaya, Ken Yamazaki, Ikuo Yasumasu, and Toru Higashinakagawa                               | 456 |
| Transforming growth factor- $\beta$ s and their receptors in aging rat prostate                                                                                        | Hong Zhao, Aditi Patra, Yuichiro Tanaka, Long-Cheng Li, and Rajvir Dahiya                                                                                             | 464 |
| Conversion of gastric mucosa to intestinal metaplasia in Cdx2-expressing transgenic mice                                                                               | Hiroyuki Mutoh, Yoji Hakamata, Kiichi Sato, Akashi Eda, Ichiro Yanaka, Sayaka Honda, Hiroyuki Osawa, Yoshinari Kaneko, and Kentaro Sugano                             | 470 |



|                                                                                                                                                         |                                                                                                                                                             |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Enhanced expression of insulin-like growth factor binding protein-3 sensitizes the growth inhibitory effect of anticancer drugs in gastric cancer cells | <b>Dae-Yeol Lee, Ho Keun Yi,<br/>Pyoung Han Hwang, and Youngman Oh</b>                                                                                      | <b>480</b> |
| Functional interaction between Brn-3a and Src-1 co-activates Brn-3a-mediated transactivation                                                            | <b>Jonathan H. Dennis,<br/>Vishwanie Budhram-Mahadeo,<br/>and David S. Latchman</b>                                                                         | <b>487</b> |
| The N-terminal splice product <i>NF1-10a-2</i> of the <i>NF1</i> gene codes for a transmembrane segment                                                 | <b>Dieter Kaufmann, Ralf Müller,<br/>Oliver Kenner, Werner Leistner,<br/>Christian Hein, Walther Vogel,<br/>and Britta Bartelt</b>                          | <b>496</b> |
| PP1 phosphatase is involved in Bcl-2 dephosphorylation after prolonged mitotic arrest induced by paclitaxel                                             | <b>Laetitia Brichese and Annie Valette</b>                                                                                                                  | <b>504</b> |
| Topoisomerase I and ATP activate cDNA synthesis of human immunodeficiency virus type 1                                                                  | <b>Hidehiro Takahashi,<br/>Hirofumi Sawa, Hideki Hasegawa,<br/>Yuko Shoya, Tetsutaro Sata,<br/>William W. Hall, Kazuo Nagashima,<br/>and Takeshi Kurata</b> | <b>509</b> |

**Number 3, June 14, 2002**

**INTERVIEW**

|                                    |                        |            |
|------------------------------------|------------------------|------------|
| A conversation with Eugene Kennedy | <b>K. Noelle Gracy</b> | <b>519</b> |
|------------------------------------|------------------------|------------|

**REGULAR ARTICLES**

|                                                                                                                            |                                                                                                                                                       |            |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Innate form of HCV core protein plays an important role in the localization and the function of HCV core protein           | <b>Takayuki Yamanaka, Masao Uchida,<br/>and Takefumi Doi</b>                                                                                          | <b>521</b> |
| Subcellular localization of HCV core protein regulates its ability for p53 activation and p21 suppression                  | <b>Takayuki Yamanaka, Tatsuhiko Kodama,<br/>and Takefumi Doi</b>                                                                                      | <b>528</b> |
| Purification and characterization of a novel 7-kDa non-specific lipid transfer protein-2 from rice ( <i>Oryza sativa</i> ) | <b>Yaw-Jen Liu, Dharmaraj Samuel,<br/>Chi-Hung Lin, and Ping-Chiang Lyu</b>                                                                           | <b>535</b> |
| Shear stress mediates tyrosylprotein sulfotransferase isoform shift in human endothelial cells                             | <b>Sandra Goettsch, Winfried Goettsch,<br/>Henning Morawietz, and Peter Bayer</b>                                                                     | <b>541</b> |
| Activation of PKC- $\beta$ isoforms mediates HNE-induced MCP-1 release by macrophages                                      | <b>M. Nitti, C. Domenicotti, C. d'Abramo,<br/>S. Assereto, D. Cottalasso, E. Melloni,<br/>G. Poli, F. Biasi, U.M. Marinari,<br/>and M.A. Pronzato</b> | <b>547</b> |

|                                                                                                                                                                                                |                                                                                                                                     |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------|
| A fungal auxin antagonist, hypaphorine prevents the indole-3-acetic acid-dependent irreversible inactivation of horseradish peroxidase: inhibition of Compound III-mediated formation of P-670 | <b>Tomonori Kawano, Nakako Kawano, and Frédéric Lapeyrie</b>                                                                        | <b>553</b> |
| Identification of a novel <i>Comamonas testosteroni</i> gene encoding a steroid-inducible extradiol dioxygenase                                                                                | <b>Dirk Skowasch, Eric Möbus, and Edmund Maser</b>                                                                                  | <b>560</b> |
| Evidence for a wide occurrence of proton-translocating pyrophosphatase genes in parasitic and free-living protozoa                                                                             | <b>José R. Pérez-Castiñeira, Jorge Alvar, Luis M. Ruiz-Pérez, and Aurelio Serrano</b>                                               | <b>567</b> |
| Purification and characterization of a neurotoxin from the venom of <i>Ophiophagus hannah</i> (king cobra)                                                                                     | <b>Long-Sen Chang, Jau-Cheng Liou, Shinne-Ren Lin, and Hsien-Bin Huang</b>                                                          | <b>574</b> |
| ARHGAP10, a novel human gene coding for a potentially cytoskeletal Rho-GTPase activating protein                                                                                               | <b>Daniela Sanchez Bassères, Edna Vedelago Tizzei, Adriana A S. Duarte, Fernando Ferreira Costa, and Sara Teresinha Olalla Saad</b> | <b>579</b> |
| Identification of protein kinase CK2 as a potent kinase of Epstein-Barr virus latent membrane protein 1                                                                                        | <b>Lang-Ming Chi, Jau-Song Yu, and Yu-Sun Chang</b>                                                                                 | <b>586</b> |
| Heat shock protein 60 elicits abnormal response in macrophages of diabetes-prone non-obese diabetic mice                                                                                       | <b>Thure Adler, Hidehiko Akiyama, Christian Herder, Hubert Kolb, and Volker Burkart</b>                                             | <b>592</b> |
| Activation of peroxisome proliferator-activated receptor $\gamma$ inhibits osteoprotegerin gene expression in human aortic smooth muscle cells                                                 | <b>Mingui Fu, Jifeng Zhang, Yiming Lin, Xiaojun Zhu, Timothy M. Willson, and Yuqing E. Chen</b>                                     | <b>597</b> |
| WISP-2 is a secreted protein and can be a marker of estrogen exposure in MCF-7 cells                                                                                                           | <b>Hidekuni Inadera, Hong-Yan Dong, and Kouji Matsushima</b>                                                                        | <b>602</b> |
| Genomic organization, transcriptional mapping, and evolutionary implications of the human bi-directional histidyl-tRNA synthetase locus (HARS/HARSL)                                           | <b>Terrance P. O'Hanlon and Frederick W. Miller</b>                                                                                 | <b>609</b> |
| Hypocretin stimulates [ $^{35}$ S]GTP $\gamma$ S binding in Hcrtr 2-transfected cell lines and in brain homogenate                                                                             | <b>T. Shiba, M. Ozu, Y. Yoshida, E. Mignot, and S. Nishino</b>                                                                      | <b>615</b> |
| Secondary structural wobble: the limits of protein prediction accuracy                                                                                                                         | <b>Ji-Tao Huang and Ming-Tao Wang</b>                                                                                               | <b>621</b> |
| Modulation of $\gamma\delta$ T cells in mouse buccal epithelium following antigen priming                                                                                                      | <b>Kevin Otten, Heuy-Ching Wang, Philip R. Wyde, and John R. Klein</b>                                                              | <b>626</b> |
| Mouse aquaporin 10 gene (AQP10) is a pseudogene                                                                                                                                                | <b>Tomonori Morinaga, Masamichi Nakakoshi, Atsushi Hirao, Masashi Imai, and Kenichi Ishibashi</b>                                   | <b>630</b> |

|                                                                                                                                                             |                                                                                                                                   |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----|
| Analysis of gene expression profile in p130 <sup>Cas</sup> -deficient fibroblasts                                                                           | Tetsuya Nakamoto, Takahiro Suzuki, Jinhong Huang, Tomoko Matsumura, Sachiko Seo, Hiroaki Honda, Ryuichi Sakai, and Hisamaru Hirai | 635 |
| Activation of RET tyrosine kinase regulates interleukin-8 production by multiple signaling pathways                                                         | Naoko Iwahashi, Hideki Murakami, Yuji Nimura, and Masahide Takahashi                                                              | 642 |
| Identification of human L-fucose kinase amino acid sequence                                                                                                 | Stephan Hinderlich, Markus Berger, Astrid Blume, Hao Chen, Darius Ghaderi, and Christian Bauer                                    | 650 |
| The C-terminus of Gi family G-proteins as a determinant of 5-HT <sub>1A</sub> receptor coupling                                                             | Dianne Kowal, Jean Zhang, Stanley Nawoschik, Rafal Ochalski, Angela Vlattas, Qin Shan, Lee Schechter, and John Dunlop             | 655 |
| Histone deacetylase inhibition results in decreased macrophage CD9 expression                                                                               | Xue-Qing Wang, M. Leticia Alfaro, Glenn F. Evans, and Steven H. Zuckerman                                                         | 660 |
| Prolonged incubation in seawater induces a DNA-dependent protein phosphorylation activity in <i>Arbacia punctulata</i> eggs                                 | Jyotshnabala Kanungo                                                                                                              | 667 |
| Upregulation of p21 <sup>WAF1/Cip1</sup> precedes tumor necrosis factor-induced necrosis-like cell death                                                    | Sandra Ussat, Ulf-Eike Werner, Marie-Luise Kruse, Silke Lüschen, Gudrun Scherer, Dieter Kabelitz, and Sabine Adam-Klages          | 672 |
| Secretion of MUC5AC mucin from pancreatic cancer cells in response to forskolin and VIP                                                                     | Jenny J.L. Ho, Suzanne Crawley, Pamela L. Pan, Ellyn R. Farrelly, and Young S. Kim                                                | 680 |
| Budding yeast Cdc5 phosphorylates Net1 and assists Cdc14 release from the nucleolus                                                                         | Satoshi Yoshida and Akio Toh-e                                                                                                    | 687 |
| Physical association of β2 integrin with GPI-80, a novel glycosylphosphatidylinositol-anchored protein with potential for regulating adhesion and migration | Tadashi Watanabe and Fujiro Sendo                                                                                                 | 692 |
| Human recombinant stem cell factor promotes spermatogonial proliferation, but not meiosis initiation in organ culture of newt testis fragments              | Keisuke Abé, Yan Jin, Takashi Yamamoto, and Shin-Ichi Abé                                                                         | 695 |
| Identification of a deubiquitinating enzyme subfamily as substrates of the von Hippel–Lindau tumor suppressor                                               | Zaibo Li, Dakun Wang, Xi Na, Susan R. Schoen, Edward M. Messing, and Guan Wu                                                      | 700 |
| Magnesium influx enhanced by nitric oxide in hypertensive rat proximal tubule cells                                                                         | Akira Ikari, Tomoko Kano, and Yasunobu Suketa                                                                                     | 710 |



|                                                                                                                      |                                                                                                                                     |            |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------|
| Overcoming the blockade at the upstream of caspase cascade in Fas-resistant HTLV-I-infected T cells by cycloheximide | <b>Aurus Kongphanich, Michinari Hieda, Kenji Kurokawa, Takashi Murata, and Nobuyuki Kobayashi</b>                                   | <b>714</b> |
| Regulation of the type III InsP <sub>3</sub> receptor by InsP <sub>3</sub> and calcium                               | <b>Allison F. O'Neill, Robert E. Hagar, Warren R. Zipfel, Michael H. Nathanson, and Barbara E. Ehrlich</b>                          | <b>719</b> |
| Activation of Erk1/2 and Akt in astrocytes under ischemia                                                            | <b>Zhongjian Jiang, Yun Zhang, Xiaoqian Chen, Philip Yeung Lam, Hui Yang, Qunyuan Xu, and Albert Cheung Hoi Yu</b>                  | <b>726</b> |
| Head and neck cancer antigens recognized by the humoral immune system                                                | <b>Mikio Monji, Satoru Senju, Tetsuya Nakatsura, Kazuhiro Yamada, Motohiro Sawatsubashi, Akira Inokuchi, and Yasuharu Nishimura</b> | <b>734</b> |
| Tenascins are associated with lipid rafts isolated from mouse brain                                                  | <b>Joachim Kappler, Stephan L. Baader, Sebastian Franken, Penka Pesheva, Karl Schilling, Uwe Rauch, and Volkmar Gieselmann</b>      | <b>742</b> |

**Number 4, June 21, 2002**

|                                                                                                                                  |                                                                                                                                                                         |            |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Hormonal induction of hepatic mitochondrial ornithine/citrulline transporter mRNA                                                | <b>Sidney M. Morris Jr. and Diane Kepka-Lenhart</b>                                                                                                                     | <b>749</b> |
| Suppression of inducible nitric oxide synthase and tumor necrosis factor- $\alpha$ expression by 4-nonylphenol in macrophages    | <b>Ho Jin You, Chul Yung Choi, Young Jin Jeon, Young Chul Chung, Shin Keon Kang, Kyung-Soo Hahm, and Hye Gwang Jeong</b>                                                | <b>753</b> |
| Novel proteinaceous toxins from the nematocyst venom of the Okinawan sea anemone <i>Phyllodiscus semoni</i> Kwietniewski         | <b>Hiroshi Nagai, Naomasa Oshiro, Kyoko Takuwa-Kuroda, Setsuko Iwanaga, Masatoshi Nozaki, and Terumi Nakajima</b>                                                       | <b>760</b> |
| Pigment epithelium-derived factor exerts opposite effects on endothelial cells of different phenotypes                           | <b>Helen Hutchings, Martine Maitre-Boube, Joyce Tombran-Tink, and Jean Plouët</b>                                                                                       | <b>764</b> |
| Molecular cloning of one isotype of human lamina-associated polypeptide 1s and a topological analysis using its deletion mutants | <b>Yukihiro Kondo, Junpei Kondoh, Daisuke Hayashi, Tadanobu Ban, Masatoshi Takagi, Yasuhiro Kamei, Lyuji Tsuji, Jiyoong Kim, and Yoshihiro Yoneda</b>                   | <b>770</b> |
| Stabilization of androgen receptor protein is induced by agonist, not by antagonists                                             | <b>Takashi Furutani, Tomoyuki Watanabe, Kyouko Tanimoto, Takamichi Hashimoto, Hiroshi Koutoku, Masafumi Kudoh, Yasuaki Shimizu, Shigeaki Kato, and Hisataka Shikama</b> | <b>779</b> |

|                                                                                                                                                                                                                            |                                                                                                                                                     |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Inhibition of stearoyl-CoA desaturase activity by the <i>cis</i> -9, <i>trans</i> -11 isomer and the <i>trans</i> -10, <i>cis</i> -12 isomer of conjugated linoleic acid in MDA-MB-231 and MCF-7 human breast cancer cells | Youngjin Choi, Yeonhwa Park, Jayne M. Storkson, Michael W. Pariza, and James M. Ntambi                                                              | 785 |
| TEF-1 and MEF2 transcription factors interact to regulate muscle-specific promoters                                                                                                                                        | Tomoji Maeda, Mahesh P. Gupta, and Alexandre F.R. Stewart                                                                                           | 791 |
| Acute and chronic treatment of ob/ob and db/db mice with AICAR decreases blood glucose concentrations                                                                                                                      | Amy E. Halseth, Nancy J. Ensor, Tommi A. White, Stuart A. Ross, and Eric A. Gulve                                                                   | 798 |
| Allosteric mechanisms in P450eryF probed with 1-pyrenebutanol, a novel fluorescent substrate                                                                                                                               | Dmitri R. Davydov, Santosh Kumar, and James R. Halpert                                                                                              | 806 |
| Generation and characterization of novel monoclonal antibodies to the Ret receptor tyrosine kinase                                                                                                                         | Giuliana Salvatore, Satoshi Nagata, Marc Billaud, Massimo Santoro, Giancarlo Vecchio, and Ira Pastan                                                | 813 |
| GTP is required to stabilize and display transamidation activity of transglutaminase 2                                                                                                                                     | Ju-Hong Jeon, Sung-Yup Cho, Chai-Wan Kim, Dong-Myung Shin, Joon-Chul Kweon, Kyung-Ho Choi, Sang-Chul Park, and In-Gyu Kim                           | 818 |
| Palmitoylcarnitine modulates interaction protein kinase C $\delta$ -GAP-43                                                                                                                                                 | Joanna Sobiesiak-Mirska and Katarzyna A. Nałęcz                                                                                                     | 823 |
| O <sub>2</sub> -dependent stimulation of the pentose phosphate pathway by <i>S</i> -nitrosocysteine in human erythrocytes                                                                                                  | Francesco Misiti, Elisabetta Meucci, Cecilia Zuppi, Federica Vincenzoni, Bruno Giardina, Massimo Castagnola, and Irene Messana                      | 829 |
| Human secretory signal peptide description by hidden Markov model and generation of a strong artificial signal peptide for secreted protein expression                                                                     | Steve Barash, Wei Wang, and Yanggu Shi                                                                                                              | 835 |
| A novel $\beta$ 1,3- <i>N</i> -acetylglucosaminyltransferase involved in invasion of cancer cells as assayed in vitro                                                                                                      | Ken Kataoka and Nam-ho Huh                                                                                                                          | 843 |
| Dilinoleoylphosphatidylcholine decreases LPS-induced TNF- $\alpha$ generation in Kupffer cells of ethanol-fed rats: respective roles of MAPKs and NF- $\kappa$ B                                                           | Qi Cao, Ki M. Mak, and Charles S. Lieber                                                                                                            | 849 |
| Dual regulatory role of human cytomegalovirus immediate-early protein in <i>IL1B</i> transcription is dependent upon Spi-1/PU.1                                                                                            | Zhiyong Yang, Nawarat Wara-aswapati, Yasuhiro Yoshida, Nancy Walker, Deborah L. Galson, James Listman, and Philip E. Auron                          | 854 |
| Establishment and characterization of immortal hepatocytes derived from various transgenic mouse lines                                                                                                                     | Rainer Klocke, M. José Gómez-Lechón, Anja Ehrhardt, Tomas Mendoza-Figueroa, M. Teresa Donato, Rubén López-Revilla, José V. Castell, and Dieter Paul | 864 |

|                                                                                                                                         |                                                                                                                                                                                                                                                  |            |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| DNA fragmentation and morphological changes in apoptotic human lymphocytes                                                              | <b>Stefan Czene, Elisabetta Testa, Jonas Nygren, Igor Belyaev, and Mats Harms-Ringdahl</b>                                                                                                                                                       | <b>872</b> |
| Angiostatin-like molecules are generated by snake venom metalloproteinases                                                              | <b>Paulo Lee Ho, Solange Maria de Toledo Serrano, Ana Marisa Chudzinski-Tavassi, Ana Maria Moura da Silva, Reinhard Mentele, Cristina Caldas, Maria Luiza Vilela Oliva, Isabel de Fátima Correia Batista, and Maria Leonor Sarno de Oliveira</b> | <b>879</b> |
| Effects of metallic silver particles on resonance energy transfer in labeled bovine serum albumin                                       | <b>Joanna Malicka, Ignacy Gryczynski, Jozef Kusba, Yibing Shen, and Joseph R. Lakowicz</b>                                                                                                                                                       | <b>886</b> |
| GroEL interacts transiently with oxidatively inactivated rhodanese facilitating its reactivation                                        | <b>Girish C. Melkani, Gustavo Zardeneta, and Jose A. Mendoza</b>                                                                                                                                                                                 | <b>893</b> |
| CAS/CSE 1 stimulates E-cadherin-dependent cell polarity in HT-29 human colon epithelial cells                                           | <b>Ming-Chung Jiang, Ching-Fong Liao, and Chia-Chen Tai</b>                                                                                                                                                                                      | <b>900</b> |
| A new organotypic culture of thyroid tissue maintains three-dimensional follicles with C cells for a long term                          | <b>Shuji Toda, Keiko Watanabe, Fumiaki Yokoi, Sueo Matsumura, Koichi Suzuki, Akifumi Ootani, Shigehisa Aoki, Norimasa Koike, and Hajime Sugihara</b>                                                                                             | <b>906</b> |
| cDNA sequence and tissue expression of <i>Fugu rubripes</i> prion protein-like: a candidate for the teleost orthologue of tetrapod PrPs | <b>Tohru Suzuki, Tadahide Kurokawa, Hisashi Hashimoto, and Motohiko Sugiyama</b>                                                                                                                                                                 | <b>912</b> |
| The hyaluronan receptor for endocytosis (HARE) is not CD44 or CD54 (ICAM-1)                                                             | <b>Janet A. Weigel, Robert C. Raymond, and Paul H. Weigel</b>                                                                                                                                                                                    | <b>918</b> |

Number 5, June 28, 2002

## BREAKTHROUGHS AND VIEWS

|                                                                                             |                                            |            |
|---------------------------------------------------------------------------------------------|--------------------------------------------|------------|
| Neuritogenesis: polarization of constitutive exocytosis by effectors of Rho-family GTPases? | <b>Felicia Y.H. Teng and Bor Luen Tang</b> | <b>923</b> |
|---------------------------------------------------------------------------------------------|--------------------------------------------|------------|

## REGULAR ARTICLES

|                                                                                                |                                                                                |            |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------|
| Membrane association of estrogen receptor $\alpha$ mediates estrogen effect on MAPK activation | <b>Zhenguo Zhang, Bernhard Maier, Richard J. Santen, and Robert X.-D. Song</b> | <b>926</b> |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------|



|                                                                                                                                                                                           |                                                                                                                                                                                                |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Necrosis has orderly DNA fragmentations                                                                                                                                                   | <b>Yee-Jiun Kok, Myint Swe,<br/>and Kwok-Hung Sit</b>                                                                                                                                          | <b>934</b>  |
| $\beta$ ig-h3 supports keratinocyte adhesion,<br>migration, and proliferation through $\alpha 3\beta 1$<br>integrin                                                                       | <b>Jong-Sup Bae, Suk-Hee Lee,<br/>Jung-Eun Kim, Je-Yong Choi,<br/>Rang-Woon Park, Jae Yong Park,<br/>Hyun-Sook Park, Young-Sook Sohn,<br/>Dong-Sin Lee, Eunhee Bae Lee,<br/>and In-San Kim</b> | <b>940</b>  |
| The P1' specificity of tobacco etch virus<br>protease                                                                                                                                     | <b>Rachel B. Kapust, József Tözsér,<br/>Terry D. Copeland,<br/>and David S. Waugh</b>                                                                                                          | <b>949</b>  |
| Involvement of CCAAT/enhancer-binding<br>protein $\alpha$ in haptoglobin gene expression<br>by all- <i>trans</i> -retinoic acid                                                           | <b>Il-Ha Lee, Jeong-Hwa Lee, Myung-Jae Lee,<br/>Soo-Young Lee, and In-Sook Kim</b>                                                                                                             | <b>956</b>  |
| Amino acids control ammonia pulses in yeast<br>colonies                                                                                                                                   | <b>Blanka Zikánová, Martin Kuthan,<br/>Markéta Řičicová, Jitka Forstová,<br/>and Zdena Palková</b>                                                                                             | <b>962</b>  |
| Dimerization is required for phosphorylation<br>and DNA binding of TonEBP/NFAT5                                                                                                           | <b>Sang Do Lee, Seung Kyoong Woo,<br/>and H. Moo Kwon</b>                                                                                                                                      | <b>968</b>  |
| Cell adhesion protects c-Raf-1 against<br>ubiquitin-dependent degradation by the<br>proteasome                                                                                            | <b>Stéphane Manenti, Christelle Delmas,<br/>and Jean-Marie Darbon</b>                                                                                                                          | <b>976</b>  |
| Inhibition of Rho-kinase induces $\alpha$ B-crystallin<br>expression in lens epithelial cells                                                                                             | <b>Rahul N. Khurana, Rupa Latha Maddala,<br/>Hiroaki Shimokawa, J. Samuel Zigler,<br/>David L. Epstein, and P. Vasantha Rao</b>                                                                | <b>981</b>  |
| A non-IGF binding mutant of IGFBP-3<br>modulates cell function in breast epithelial<br>cells                                                                                              | <b>C.M. Perks, C. McCaig, J.B. Clarke,<br/>D.R. Clemmons, and J.M.P. Holly</b>                                                                                                                 | <b>988</b>  |
| Effects of a non-IGF binding mutant of<br>IGFBP-5 on cell death in human breast<br>cancer cells                                                                                           | <b>C.M. Perks, C. McCaig, J.B. Clarke,<br/>D.R. Clemmons, and J.M.P. Holly</b>                                                                                                                 | <b>995</b>  |
| Thrombin-stimulated Pyk2 phosphorylation<br>in human endothelium is dependent on<br>intracellular calcium and independent of<br>protein kinase C and Src kinases                          | <b>Rosemary J. Keogh, Rebecca A. Houlston,<br/>and Caroline P.D. Wheeler-Jones</b>                                                                                                             | <b>1001</b> |
| Isolation of novel rice ( <i>Oryza sativa</i> L.)<br>multiple stress responsive MAP kinase gene,<br><i>OsMSRMK2</i> , whose mRNA accumulates<br>rapidly in response to environmental cues | <b>Ganesh K. Agrawal, Randeep Rakwal,<br/>and Hitoshi Iwahashi</b>                                                                                                                             | <b>1009</b> |
| PDGF-BB enhances expression of, and reduces<br>adhesion to, laminin-5 in vascular smooth<br>muscle cells                                                                                  | <b>K. Kingsley, W.L. Rust, J.L. Huff,<br/>R.C. Smith, and G.E. Plopper</b>                                                                                                                     | <b>1017</b> |
| Metalloprotease inhibitor blocks angiotensin<br>II-induced migration through inhibition<br>of epidermal growth factor receptor<br>transactivation                                         | <b>Shuichi Saito, Gerald D. Frank,<br/>Evangeline D. Motley, Peter J. Dempsey,<br/>Hirotooshi Utsunomiya, Tadashi Inagami,<br/>and Satoru Eguchi</b>                                           | <b>1023</b> |

|                                                                                                                                                                                         |                                                                                                                                                                                                                    |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Lack of nitric oxide synthase depresses ion transporting enzyme function in cardiac muscle                                                                                              | <b>Lan Zhou, Arthur L. Burnett,<br/>Paul L. Huang, Lewis C. Becker,<br/>Periannan Kuppusamy, David A. Kass,<br/>J. Kevin Donahue, David Proud,<br/>James S.K. Sham, Ted M. Dawson,<br/>and Kai Y. Xu</b>           | <b>1030</b> |
| Nurr1 affects pRL-TK but not phRG-B internal control plasmid in genetic reporter system                                                                                                 | <b>Janusz Matuszyk, Ewa Ziolo,<br/>Malgorzata Cebrat, Izabela Kochel,<br/>and Leon Strzadala</b>                                                                                                                   | <b>1036</b> |
| Solution structure of betacellulin, a new member of EGF-family ligands                                                                                                                  | <b>Kazunori Miura, Hideki Doura,<br/>Tomoyasu Aizawa, Hiroko Tada,<br/>Masaharu Seno, Hidenori Yamada,<br/>and Keiichi Kawano</b>                                                                                  | <b>1040</b> |
| The presence of D- $\beta$ -aspartic acid-containing peptides in elastic fibers of sun-damaged skin: a potent marker for ultraviolet-induced skin aging                                 | <b>Noriko Fujii, Shingo Tajima,<br/>Nobuhiko Tanaka, Norihiro Fujimoto,<br/>Takumi Takata, and Tadashi Shimo-Oka</b>                                                                                               | <b>1047</b> |
| Downregulation of $\beta$ 2-microglobulin in human cord blood somatic stem cells after transplantation into livers of SCID-mice: an escape mechanism of stem cells?                     | <b>W. Beerheide, M.A. von Mach, M. Ringel,<br/>C. Fleckenstein, S. Schumann, N. Renzing,<br/>A. Hildebrandt, W. Brenner, O. Jensen,<br/>S. Gebhard, K. Reifenberg, J. Bender,<br/>F. Oesch, and J.G. Hengstler</b> | <b>1052</b> |
| The truncated hemoglobin from <i>Mycobacterium leprae</i>                                                                                                                               | <b>Paolo Visca, Giulia Fabozzi,<br/>Andrea Petrucca, Chiara Ciaccio,<br/>Massimo Coletta, Giampiero De Sanctis,<br/>Martino Bolognesi, Mario Milani,<br/>and Paolo Ascenzi</b>                                     | <b>1064</b> |
| <i>YlALK1</i> encoding the cytochrome P450ALK1 in <i>Yarrowia lipolytica</i> is transcriptionally induced by <i>n</i> -alkane through two distinct <i>cis</i> -elements on its promoter | <b>Toru Sumita, Toshiya Iida,<br/>Setsu Yamagami, Hiroyuki Horiuchi,<br/>Masamichi Takagi, and Akinori Ohta</b>                                                                                                    | <b>1071</b> |
| Restoration of TGF- $\beta$ regulation of plasminogen activator inhibitor-1 in Smad3-restituted human choriocarcinoma cells                                                             | <b>Guoxiong Xu, Chandan Chakraborty,<br/>and Peeyush K. Lala</b>                                                                                                                                                   | <b>1079</b> |
| Brain-derived neurotrophic factor promotes interaction of the Nck2 adaptor protein with the TrkB tyrosine kinase receptor                                                               | <b>Shingo Suzuki, Masaharu Mizutani,<br/>Kenji Suzuki, Masashi Yamada,<br/>Masami Kojima, Hiroshi Hatanaka,<br/>and Shinichi Koizumi</b>                                                                           | <b>1087</b> |
| Specificity of antioxidant enzyme inhibition in skeletal muscle to reactive nitrogen species donors                                                                                     | <b>John M. Lawler and Wook Song</b>                                                                                                                                                                                | <b>1093</b> |
| Role of CXC chemokines in the enhancement of LPS-induced neutrophil accumulation in the lung of mice by dexamethasone                                                                   | <b>Kimiko Aoki, Yumiko Ishida,<br/>Nana Kikuta, Hiroe Kawai,<br/>Mie Kuroiwa,<br/>and Hitoshi Sato</b>                                                                                                             | <b>1101</b> |

|                                                                                                                                                                            |                                                                                                                                                 |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Dual regulation of phospholipase D1 by protein kinase C $\alpha$ in vivo                                                                                                   | Masahiro Oka, Tomohiro Hitomi, Taro Okada, Shun-ichi Nakamura, Hiroshi Nagai, Motoi Ohba, Toshio Kuroki, Ushio Kikkawa, and Masamitsu Ichihashi | 1109 |
| Mutation of macrophage colony stimulating factor ( <i>Csf1</i> ) causes osteopetrosis in the <i>tl</i> rat                                                                 | David E. Dobbins, Raman Sood, Akira Hashiramoto, Carl T. Hansen, Ronald L. Wilder, and Elaine F. Remmers                                        | 1114 |
| Gene expression profile analysis of rheumatoid synovial fibroblast cultures revealing the overexpression of genes responsible for tumor-like growth of rheumatoid synovium | Nobuyuki Watanabe, Kiichiro Ando, Shinichi Yoshida, Sawako Inuzuka, Masaaki Kobayashi, Nobuo Matsui, and Takashi Okamoto                        | 1121 |
| Dysfunction of rat liver mitochondria by selenite: induction of mitochondrial permeability transition through thiol-oxidation                                              | Tae-soo Kim, Dae-won Jeong, Byung Yup Yun, and Ick Young Kim                                                                                    | 1130 |
| Keratin degradation: a cooperative action of two enzymes from <i>Stenotrophomonas</i> sp.                                                                                  | Shohei Yamamura, Yasutaka Morita, Quamrul Hasan, Kenji Yokoyama, and Eiichi Tamiya                                                              | 1138 |
| The Gef1 protein of <i>Saccharomyces cerevisiae</i> is associated with chloride channel activity                                                                           | Krzysztof Flis, Piotr Bednarczyk, Renata Hordejuk, Adam Szewczyk, Vladimir Berest, Krzysztof Dolowy, Aleksander Edelman, and Anna Kurlandzka    | 1144 |
| Binding of the mammalian homolog of the <i>Drosophila</i> discs large tumor suppressor protein to the ribosome receptor                                                    | Minji Kim, Hironori Ogawa, Kazuyoshi Kohu, Minoru Ichikawa, Kiyotoshi Satoh, Takefumi Ishidao, Shigeyuki Nada, and Tetsu Akiyama                | 1151 |
| PAI-1 promotes extracellular matrix deposition in the airways of a murine asthma model                                                                                     | Chad K. Oh, Barbara Ariue, Rodrigo F. Alban, Bryan Shaw, and Seong H. Cho                                                                       | 1155 |
| Effects of oral vitamin C on monocyte: endothelial cell adhesion in healthy subjects                                                                                       | Kevin J. Woollard, Chris J. Loryman, Elizabeth Meredith, Ruth Bevan, Jacqui A. Shaw, Joe Lunec, and Helen R. Griffiths                          | 1161 |
| Cloning and characterization of a novel human gene <i>RNF38</i> encoding a conserved putative protein with a RING finger domain                                            | Iris Eisenberg, Hagit Hochner, Tatjana Levi, Rodrigo Yelin, Tamar Kahan, and Stella Mitrani-Rosenbaum                                           | 1169 |
| Cell death by pyruvate deficiency in proliferative cultured calvarial osteoblasts                                                                                          | Eiichi Hinoi, Sayumi Fujimori, Akihiro Takemori, and Yukio Yoneda                                                                               | 1177 |
| Fibrillarin binds to a 3' <i>cis</i> -regulatory element in pre-mRNA of <i>uvi15<sup>+</sup></i> in fission yeast                                                          | Yeun Kyu Jang, Minkyu Kim, and Sang Dai Park                                                                                                    | 1184 |



## ERRATA

|                                                                                                                                                                                                                                                                                                                                                                                                                  |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Volume <b>291</b> , Number 4 (2002), in the article "Evidence for 'Pre-recruitment' as a New Mechanism of Transcription Activation in <i>Escherichia coli</i> : The Large Excess of SoxS Binding Sites per Cell Relative to the Number of SoxS Molecules per Cell" by Kevin L. Griffith, Ishita M. Shah, Todd E. Myers, Michael C. O'Neill, and Richard E. Wolf, Jr., pages 979–986 (doi:10.1006/bbrc.2002.6559) | <b>1191</b> |
| Volume <b>292</b> , Number 1 (2002), in the article "Chemical Induction of Cellular Antioxidants Affords Marked Protection against Oxidative Injury in Vascular Smooth Muscle Cells" by Zhuoxiao Cao and Yunbo Li, pages 50–57 (doi:10.1006/bbrc.2002.6614)                                                                                                                                                      | <b>1192</b> |
| Volume <b>292</b> , Number 1 (2002), in the article "Multiple Liver-Specific Factors Bind to a 64-bp Element and Activate Apo(a) Gene" by Vikas Handa, Mahboob-ul-hussain, Nirupma Pati, and Uttam Pati, pages 243–249 (doi:10.1006/bbrc.2002.6639)                                                                                                                                                              | <b>1193</b> |
| Author Index for Volume 294                                                                                                                                                                                                                                                                                                                                                                                      | <b>1194</b> |

**Volume 295, Number 1, July 5, 2002**

|                                                                                                                                                              |                                                                                               |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------|
| Overexpression and biochemical characterization of $\beta$ -1,3- <i>N</i> -acetylgalactosaminyltransferase LgtD from <i>Haemophilus influenzae</i> strain Rd | <b>Jun Shao, Jianbo Zhang, Przemyslaw Kowal, Yuquan Lu, and Peng George Wang</b>              | <b>1</b>  |
| The antioxidant activity of phloretin: the disclosure of a new antioxidant pharmacophore in flavonoids                                                       | <b>Bashir M. Rezk, Guido R.M.M. Haenen, Wim J.F. van der Vijgh, and Aalt Bast</b>             | <b>9</b>  |
| Sensitivity enhancement of DNA sensors by nanogold surface modification                                                                                      | <b>Tao Liu, Ji'an Tang, and Long Jiang</b>                                                    | <b>14</b> |
| Significant correlation of the SCN1A mutations and severe myoclonic epilepsy in infancy                                                                      | <b>Iori Ohmori, Mamoru Ouchida, Yoko Ohtsuka, Eiji Oka, and Kenji Shimizu</b>                 | <b>17</b> |
| Insights into the molecular mechanism of apoptosis induced by TNF- $\alpha$ in mouse epidermal JB6-derived RT-101 cells                                      | <b>Neeta Singh, Neeru Khanna, Himani Sharma, Siddhartha Kundu, and Sameena Azmi</b>           | <b>24</b> |
| Selection of human antibody fragments on the basis of stabilization of the variable domain in the presence of target antigens                                | <b>Hideki Watanabe, Kouhei Tsumoto, Ryutaro Asano, Yoshiyuki Nishimiya, and Izumi Kumagai</b> | <b>31</b> |
| Apoptosis is an adaptive response in bovine preimplantation embryos that facilitates survival after heat shock                                               | <b>F.F. Paula-Lopes and P.J. Hansen</b>                                                       | <b>37</b> |
| Transcription of <i>Xanthomonas campestris prt1</i> gene encoding protease 1 increases during stationary phase and requires global transcription factor Clp  | <b>Yi-Min Hsiao and Yi-Hsiung Tseng</b>                                                       | <b>43</b> |
| Characterization and daily variation of nitrate reductase in <i>Gracilaria tenuistipitata</i> (Rhodophyta)                                                   | <b>Patricia Fátima Lopes, Mariana Cabral de Oliveira, and Pio Colepicolo</b>                  | <b>50</b> |
| C-terminus modification of <i>Streptomyces clavuligerus</i> deacetoxycephalosporin C synthase improves catalysis with an expanded substrate specificity      | <b>H.S. Chin and T.S. Sim</b>                                                                 | <b>55</b> |
| Curcumin (diferuloylmethane), a singlet oxygen ( $^1\text{O}_2$ ) quencher                                                                                   | <b>Kumuda C. Das and Chandan K. Das</b>                                                       | <b>62</b> |
| The DNA-binding activity of protein disulfide isomerase ERp57 is associated with the $\alpha'$ domain                                                        | <b>Caterina Grillo, Sabina Coppari, Carlo Turano, and Fabio Altieri</b>                       | <b>67</b> |
| SREBP-2 and NF-Y are involved in the transcriptional regulation of squalene epoxidase                                                                        | <b>Masaaki Nagai, Jun Sakakibara, Yuichi Nakamura, Fumitake Gejyo, and Teruo Ono</b>          | <b>74</b> |

|                                                                                                                                                                |                                                                                                                                                                         |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Processing of the Hepatitis C virus precursor protein expressed in the methylotrophic yeast <i>Pichia pastoris</i>                                             | Nelson Acosta-Rivero, Alexis Musacchio, Lazaro Lorenzo, Catalina Alvarez, and Juan Morales                                                                              | 81  |
| Molecular cloning and characterization of <i>dullard</i> : a novel gene required for neural development                                                        | Reiko Satow, Te-chuan Chan, and Makoto Asashima                                                                                                                         | 85  |
| Extensive overproduction of the AdhE protein by <i>rng</i> mutations depends on mutations in the <i>cra</i> gene or in the Cra-box of the <i>adhE</i> promoter | Naoko Kaga, Genryou Umitsuki, David P. Clark, Kazuo Nagai, and Masaaki Wachi                                                                                            | 92  |
| Effect of infiltrated polyamines on polygalacturonase activity and chilling injury responses in zucchini squash ( <i>Cucurbita pepo</i> L.)                    | M.A. Martínez-Téllez, M.G. Ramos-Clamont, A.A. Gardea, and I. Vargas-Arispuro                                                                                           | 98  |
| Inhibition of glycogen synthase kinase-3 $\beta$ by bivalent zinc ions: insight into the insulin-mimetic action of zinc                                        | Ronit Ilouz, Oksana Kaidanovich, David Gurwitz, and Hagit Eldar-Finkelman                                                                                               | 102 |
| Behavior of fluorinated analogs of L-(3,4-dihydroxyphenyl)alanine and L- <i>threo</i> -(3,4-dihydroxyphenyl)serine as substrates for Dopa decarboxylase        | Carla Borri Voltattorni, Mariarita Bertoldi, Silvia Bianconi, Wei-ping Deng, Kelli Wong, InHo Kim, Brian Herbert, and Kenneth L. Kirk                                   | 107 |
| An extra human chromosome 21 reduces <i>mlc-2a</i> expression in chimeric mice and Down syndrome                                                               | Ryuichi Nishigaki, Tokuyuki Shinohara, Tosifusa Toda, Akira Omori, Sachiyo Ichinose, Masayuki Itoh, Yasuaki Shirayoshi, Akihiro Kurimasa, and Mitsuo Oshimura           | 112 |
| Identification of autoantibodies associated with systemic lupus erythematosus                                                                                  | Yoon Lim, Dae-Yeon Lee, Seongeun Lee, Sae-Young Park, Jongwan Kim, Bomsoo Cho, Hosoon Lee, Hae-Yeong Kim, Eunbong Lee, Yeong Wook Song, and Doo-Il Jeoung               | 119 |
| Purification and preliminary X-ray studies on hen serotransferrin in apo- and holo-forms                                                                       | Debi Choudhury, Piyali Guha Thakurta, Rakhi Dasgupta, U. Sen, S. Biswas, C. Chakrabarti, and J.K. Dattagupta                                                            | 125 |
| Cloning a cDNA encoding an alternatively spliced protein of BRCA2-associated factor 35                                                                         | Chiang Wang, Ida M. McCarty, Louisa Balazs, Yi Li, and Mitchell S. Steiner                                                                                              | 129 |
| Immunohistological detection of BRAF25 in human prostate tumor and cancer specimens                                                                            | Chiang Wang, Ida M. McCarty, Louisa Balazs, Yi Li, and Mitchell S. Steiner                                                                                              | 136 |
| Molecular model of shikimate kinase from <i>Mycobacterium tuberculosis</i>                                                                                     | Walter Filgueira de Azevedo Jr., Fernanda Canduri, Jaim Simões de Oliveira, Luiz Augusto Basso, Mário Sérgio Palma, José Henrique Pereira, and Diógenes Santiago Santos | 142 |



|                                                                                                                                                                                   |                                                                                                                                           |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Ile (476), a constituent of di-leucine-based motif of a major lysosomal membrane protein, LGP85/LIMP II, is important for its proper distribution in late endosomes and lysosomes | <b>Norihiko Tabuchi, Kenji Akasaki, and Hiroshi Tsuji</b>                                                                                 | <b>149</b> |
| TIRAP mediates endotoxin-induced NF- $\kappa$ B activation and apoptosis in endothelial cells                                                                                     | <b>Douglas D. Bannerman, Ryan D. Erwert, Robert K. Winn, and John M. Harlan</b>                                                           | <b>157</b> |
| Secretory production of recombinant human C-reactive protein in <i>Escherichia coli</i> , capable of binding with phosphorylcholine, and its characterization                     | <b>Toshio Tanaka, Takekazu Horio, and Yuhsi Matuo</b>                                                                                     | <b>163</b> |
| Structural characterization of <i>Escherichia coli</i> sialic acid synthase                                                                                                       | <b>Tzann-Shun Hwang, Chih-Hung Hung, Chin-Fen Teo, Guan-Ting Chen, Lee-Shang Chang, Sung-Fang Chen, Yu-Ju Chen, and Chun-Hung Lin</b>     | <b>167</b> |
| The <i>mif</i> gene is transcriptionally regulated by glucose in insulin-secreting cells                                                                                          | <b>Valérie Plaisance, Nancy Thompson, Guy Niederhauser, Jacques-Antoine Haefliger, Pascal Nicod, Gérard Waeber, and Amar Abderrahmani</b> | <b>174</b> |
| Particulate methane monooxygenase from <i>Methylosinus trichosporium</i> is a copper-containing enzyme                                                                            | <b>Jia-Ying Xin, Jun-Ru Cui, Xiao-Xue Hu, Shu-Ben Li, Chun-Gu Xia, Li-Min Zhu, and Yi-Qun Wang</b>                                        | <b>182</b> |
| Effects of histone acetylation on transcriptional regulation of manganese superoxide dismutase gene                                                                               | <b>Kayoko Maehara, Natsuko Uekawa, and Ken-Ichi Isobe</b>                                                                                 | <b>187</b> |
| Neonatal exposure to endocrine disruptors suppresses juvenile testis weight and steroidogenesis but spermatogenesis is considerably restored during puberty                       | <b>Masahiro Kuwada, Rei Kawashima, Kazuo Nakamura, Hisako Kojima, Hideyo Hasumi, Jun Maki, and Sachiko Sugano</b>                         | <b>193</b> |
| Importance of phosphate contacts for sequence recognition by <i>Eco</i> RI restriction enzyme                                                                                     | <b>Olaf Rosati, Tushar K. Srivastava, Seturam B. Katti, and Jürgen Alves</b>                                                              | <b>198</b> |

Number 2, July 12, 2002

## BREAKTHROUGHS AND VIEWS

|                                                                                                                                                                 |                                                                                                                                                                                                          |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Single nucleotide polymorphisms of thrifty genes for energy metabolism: evolutionary origins and prospects for intervention to prevent obesity-related diseases | <b>Yasuo Kagawa, Yoshiko Yanagisawa, Kyoko Hasegawa, Hisano Suzuki, Kazuto Yasuda, Hideki Kudo, Mieko Abe, Sanae Matsuda, Yuko Ishikawa, Noriko Tsuchiya, Aya Sato, Kazuo Umetsu, and Yoshiko Kagawa</b> | <b>207</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|

## REGULAR ARTICLES

- Kinetic properties of Kv4.3 and their modulation by KChIP2b  
**Shimin Wang, Sangita P. Patel, Yujie Qu, Ping Hua, Harold C. Strauss, and Michael J. Morales** 223
- Novel glycosyltransferase genes involved in the acetan biosynthesis of *Acetobacter xylinum*  
**Takehiko Ishida, Yasushi Sugano, and Makoto Shoda** 230
- Possible mechanisms by which adipocyte lipolysis is enhanced in exercise-trained rats  
**Sachiko Nomura, Hitomi Kawanami, Hiroshi Ueda, Takako Kizaki, Hideki Ohno, and Tetsuya Izawa** 236
- PDX-1 mediates glucose responsiveness of GAD<sub>67</sub>, but not GAD<sub>65</sub>, gene transcription in islets of Langerhans  
**Anette Amstrup Pedersen, Helle Vestergaard Petersen, Nicoline Videbæk, Kresten Skak, and Birgitte Koch Michelsen** 243
- Altered gene expressions involved in energy expenditure in 5-HT<sub>2C</sub> receptor mutant mice  
**Katsunori Nonogaki, Riaz A. Memon, Carl Grunfeld, Kenneth R. Feingold, and Laurence H. Tecott** 249
- A transient ghrelin surge occurs just before feeding in a scheduled meal-fed sheep  
**T. Sugino, Y. Hasegawa, Y. Kikkawa, J. Yamaura, M. Yamagishi, Y. Kurose, M. Kojima, K. Kangawa, and Y. Terashima** 255
- Estrogen regulates a tissue-specific calpain in the anterior pituitary  
**W. Rachel Duan, Masafumi Ito, Eun Jig Lee, Pei-Yu Chien, and J. Larry Jameson** 261
- 4-Hydroxynonenal affects pRb/E2F pathway in HL-60 human leukemic cells  
**Giuseppina Barrera, Stefania Pizzimenti, Stefano Laurora, Emanuela Moroni, Barbara Giglioni, and Mario U. Dianzani** 267
- Comparative genome analysis of potential regulatory elements in the ABCG5–ABCG8 gene cluster  
**Alan T. Remaley, Samantha Bark, Avram D. Walts, Lita Freeman, Sergey Shulenin, Tarmo Annilo, Eric Elgin, Hope E. Rhodes, Charles Joyce, Michael Dean, Silvia Santamarina-Fojo, and H. Bryan Brewer Jr.** 276
- Arginine antimetabolite L-canavanine induces apoptotic cell death in human Jurkat T cells via caspase-3 activation regulated by Bcl-2 or Bcl-xL  
**Myung Ho Jang, Do Youn Jun, Seok Woo Rue, Kyu Hyun Han, Wan Park, and Young Ho Kim** 283
- Expanded CTG repeats inhibit neuronal differentiation of the PC12 cell line  
**María Leonor Quintero-Mora, Francisco Depardon, James Waring, Robert G. Korneluk, and Bulmaro Cisneros** 289
- Formation of nuclear matrix filaments by p27<sup>BBP</sup>/eIF6  
**Marcello Ceci, Nina Offenhäuser, Pier Carlo Marchisio, and Stefano Biffo** 295
- Thymidine phosphorylase suppresses Fas-induced apoptotic signal transduction independent of its enzymatic activity  
**Shin-ichiro Mori, Sonshin Takao, Ryuji Ikeda, Hidetoshi Noma, Yuko Mataka, Xin Wang, Shin-ichi Akiyama, and Takashi Aikou** 300

|                                                                                                                                                                                                                                |                                                                                                                                                                           |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Aggregation and neurotoxicity of mutant amyloid $\beta$ (A $\beta$ ) peptides with proline replacement: importance of turn formation at positions 22 and 23                                                                    | Akira Morimoto, Kazuhiro Irie, Kazuma Murakami, Hajime Ohigashi, Mayumi Shindo, Masaya Nagao, Takahiko Shimizu, and Takuji Shirasawa                                      | 306 |
| Cloning, characterization, and embryonic expression analysis of the <i>Drosophila melanogaster</i> gene encoding insulin/relaxin-like peptide                                                                                  | Igor O. Nasonkin, Ayfer Alikasifoglu, Terry Barrette, Michael M. Cheng, Pamela M. Thomas, and Alexey G. Nikitin                                                           | 312 |
| Adipocytes recognize and degrade oxidized low density lipoprotein through CD36                                                                                                                                                 | Akihiko Kuniyasu, Shigeki Hayashi, and Hitoshi Nakayama                                                                                                                   | 319 |
| Evidence for a role of the nerve growth factor receptor TrkA in tyrosine phosphorylation and processing of $\beta$ -APP                                                                                                        | Philip E. Tarr, Cristina Contursi, Roberta Roncarati, Cristiana Noviello, Enrico Gherzi, Meir H. Scheinfeld, Nicola Zambrano, Tommaso Russo, and Luciano D'Adamio         | 324 |
| Quantitative monitoring of the mRNA expression pattern of the TGF- $\beta$ -isoforms ( $\beta$ 1, $\beta$ 2, $\beta$ 3) during transdifferentiation of hepatic stellate cells using a newly developed real-time SYBR Green PCR | L. Wickert, S. Steinkrüger, M. Abiaka, U. Bolkenius, O. Purps, C. Schnabel, and A.M. Gressner                                                                             | 330 |
| Down-regulation of NOSII gene expression by iontophoresis of anti-sense oligonucleotide in endotoxin-induced uveitis                                                                                                           | M. Voigt, Y. de Kozak, M. Halhal, Y. Courtois, and F. Behar-Cohen                                                                                                         | 336 |
| Sequence analysis of the complete mitochondrial genome in patients with Leber's hereditary optic neuropathy lacking the three most common pathogenic DNA mutations                                                             | Sascha Fauser, Janina Lubrichs, Dorothea Besch, and Beate Leo-Kottler                                                                                                     | 342 |
| Structural analysis of chick ephrin-A2 by function-blocking and non-blocking monoclonal antibodies                                                                                                                             | Mansoor Ahsan, Yanzhi Yin, Takamasa Ueno, Masafumi Takiguchi, and Hideaki Tanaka                                                                                          | 348 |
| Clonal heterogeneity in differentiation potential of immortalized human mesenchymal stem cells                                                                                                                                 | Takeshi Okamoto, Tomoki Aoyama, Tomitaka Nakayama, Takeharu Nakamata, Taisuke Hosaka, Koichi Nishijo, Takashi Nakamura, Tohru Kiyono, and Junya Toguchida                 | 354 |
| Human epidermis is a novel site of phospholipase B expression                                                                                                                                                                  | Eric Maury, Marie-Claude Prévost, Michel Nauze, Daniel Redoulès, Roger Tarroux, Marie Charvéron, Jean-Pierre Salles, Bertrand Perret, Hugues Chap, and Ama Gassama-Diagne | 362 |
| Targeted substrate degradation by an engineered double RING ubiquitin ligase                                                                                                                                                   | Daisuke Oyake, Hiroyuki Nishikawa, Izumi Koizuka, Mamoru Fukuda, and Tomohiko Ohta                                                                                        | 370 |
| L-trans-PDC enhances hippocampal neuronal activity by stimulating glial glutamate release independently of blocking transporters                                                                                               | Kohei Ohta, Tamotsu Nomura, Takeshi Kanno, Kaoru Nagai, Satoshi Yamamoto, Yukio Yajima, Takeshi Kondoh, Eiji Kohmura, Naoaki Saito, and Tomoyuki Nishizaki                | 376 |



|                                                                                                                                                      |                                                                                                                                                                |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Direct quantification of the flexibility of type I collagen monomer                                                                                  | Yu-Long Sun, Zong-Ping Luo, Andrzej Fertala, and Kai-Nan An                                                                                                    | 382 |
| Molecular cloning and domain structure of chicken pyruvate carboxylase                                                                               | Sarawut Jitrapakdee, Mark G. Nezie, A. Ian Cassady, Yeesim Khew-Goodall, and John C. Wallace                                                                   | 387 |
| Partial characterization of murine intestinal maltase-glucoamylase                                                                                   | Roberto Quezada-Calvillo, Francisco Rodriguez-Zuñiga, and Brian J. Underdown                                                                                   | 394 |
| Differential expression of type IV collagen isoforms in rat glomerular endothelial and mesangial cells                                               | Michael Zeisberg, Mark B. Ericksen, Yuki Hamano, Eric G. Neilson, Fuad Ziyadeh, and Raghu Kalluri                                                              | 401 |
| Molecular structure of a novel cholesterol-responsive A subclass ABC transporter, ABCA9                                                              | Armin Piehler, Wolfgang E. Kaminski, Jürgen J. Wenzel, Thomas Langmann, and Gerd Schmitz                                                                       | 408 |
| Isoflavones regulate interleukin-6 and osteoprotegerin synthesis during osteoblast cell differentiation via an estrogen-receptor-dependent pathway   | X.W. Chen, S.C. Garner, and J.J.B. Anderson                                                                                                                    | 417 |
| Two C-terminal cysteines are necessary for proper folding of the peptidase neprilysin/CD10                                                           | Alexander Navarrete Santos, Jens Wulfänger, Grit Helbing, Tanja Blosz, Jürgen Langner, and Dagmar Riemann                                                      | 423 |
| Loss of placental growth factor protects mice against vascular permeability in pathological conditions                                               | Aernout Luttun, Koen Brusselmans, Hideharu Fukao, Marc Tjwa, Shigeru Ueshima, Jean-Marc Herbert, Osamu Matsuo, Désiré Collen, Peter Carmeliet, and Lieve Moons | 428 |
| Chk1 signaling pathways that mediated G <sub>2</sub> M checkpoint in relation to the cellular resistance to the novel topoisomerase I poison BNP1350 | Ming-biao Yin, Gunnar Hapke, Jiaxi Wu, Rami G. Azrak, Cheryl Frank, Carol Wrzosek, and Youcef M. Rustum                                                        | 435 |
| A novel <i>cis</i> -element that enhances connective tissue growth factor gene expression in chondrocytic cells                                      | Takanori Eguchi, Satoshi Kubota, Seiji Kondo, Takuo Kuboki, Hirofumi Yatani, and Masaharu Takigawa                                                             | 445 |
| Structural determinants for the action of grayanotoxin in D1 S4-S5 and D4 S4-S5 intracellular linkers of sodium channel $\alpha$ -subunits           | Hiroshi Maejima, Eiji Kinoshita, Tsunetsugu Yuki, Masuhide Yakehiro, Issei Seyama, and Kaoru Yamaoka                                                           | 452 |
| ORF2 gene involves in the construction of high-order structure of bacterial cellulose                                                                | Tomonori Nakai, Yoshiharu Nishiyama, Shigenori Kuga, Yasushi Sugano, and Makoto Shoda                                                                          | 458 |
| Identification and characterization of a novel mitochondrial tricarboxylate carrier                                                                  | Shin-ichi Miyake, Toshihide Yamashita, Manabu Taniguchi, Michio Tamatani, Kohji Sato, and Masaya Tohyama                                                       | 463 |
| Coactivation of an endogenous progesterone receptor by TIF2 in COS-7 cells                                                                           | Kurt Hofman, Johannes V. Swinnen, Guido Verhoeven, and Walter Heyns                                                                                            | 469 |

|                                                                                                                                                                                                       |                                                                                                                                                               |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Leptin prevents the fall in plasma osteocalcin during starvation in male mice                                                                                                                         | A.P. Goldstone, J.K. Howard, G.M. Lord, M.A. Ghatei, J.V. Gardiner, Z.L. Wang, R.M. Wang, S.I. Girgis, C.J. Bailey, and S.R. Bloom                            | 475 |
| Neurotensin counteracts apoptosis in breast cancer cells                                                                                                                                              | Sonia Somaï, Anne Gompel, William Rostène, and Patricia Forgez                                                                                                | 482 |
| Staurosporine enhances the expression of tissue inhibitor of metalloproteinase-1 in human prostate cancer cells                                                                                       | Ken Tachibana, Takahisa Shimizu, Kazuo Tonami, and Ken Takeda                                                                                                 | 489 |
| Modification of Daxx by small ubiquitin-related modifier-1                                                                                                                                            | Moon-Sun Jang, Seung-Wook Ryu, and Eunhee Kim                                                                                                                 | 495 |
| p73-dependent expression of <i>DAN</i> during cisplatin-induced cell death and osteoblast differentiation                                                                                             | Jun Shinbo, Toshinori Ozaki, Takahito Nakagawa, Ken-ichi Watanabe, Yohko Nakamura, Masashi Yamazaki, Hideshige Moriya, Akira Nakagawara, and Shigeru Sakiyama | 501 |
| <i>Tk</i> -PTP, protein tyrosine/serine phosphatase from hyperthermophilic archaeon <i>Thermococcus kodakaraensis</i> KOD1: enzymatic characteristics and identification of its substrate proteins    | Sung-Jong Jeon, Shinsuke Fujiwara, Masahiro Takagi, Takeshi Tanaka, and Tadayuki Imanaka                                                                      | 508 |
| Regulation of Akt by EGF-R inhibitors, a possible mechanism of EGF-R inhibitor-enhanced TRAIL-induced apoptosis                                                                                       | Sang-Youel Park and Dai-Wu Seol                                                                                                                               | 515 |
| Identification of the enhancer binding protein MBF-1 of the sea urchin modulator $\alpha$ -H2A histone gene                                                                                           | Claudia Alessandro, Paola Di Simone, Alessia Buscaino, Letizia Anello, Franco Palla, and Giovanni Spinelli                                                    | 519 |
| Actinomycin D-induced apoptosis involves the potassium channel Kv1.3                                                                                                                                  | Jürgen Bock, Ildikò Szabó, Andreas Jekle, and Erich Gulbins                                                                                                   | 526 |
| The effect of gp130 stimulation on glutamate-induced excitotoxicity in primary hippocampal neurons                                                                                                    | Yi Sun, Pia März, Uwe Otten, Jiguang Ge, and Stefan Rose-John                                                                                                 | 532 |
| Calpain II colocalizes with detergent-insoluble rafts on human and Jurkat T-cells                                                                                                                     | Lorri A. Morford, Kathy Forrest, Barbara Logan, L. Kevin Overstreet, Jens Goebel, William H. Brooks, and Thomas L. Roszman                                    | 540 |
| Inhibitory effect of peroxisome proliferator-activated receptor- $\gamma$ ligands on the expression of IgE heavy chain germline transcripts in the human B cell line DND39                            | Yoshiyuki Miyazaki, Hirofumi Tachibana, and Koji Yamada                                                                                                       | 547 |
| Inhibition of LPS-induced activation of alveolar macrophages by high concentrations of LPS-binding protein                                                                                            | Lutz Hamann, Cordula Stamme, Artur J. Ulmer, and Ralf R. Schumann                                                                                             | 553 |
| $G_{q/11}$ is involved in insulin-stimulated inositol phosphoglycan putative mediator generation in rat liver membranes: co-localization of $G_{q/11}$ with the insulin receptor in membrane vesicles | S. Sleight, B.A. Wilson, D.B. Heimark, and J. Larner                                                                                                          | 561 |

## ERRATA

- Volume **285**, Number 2 (2001), in the article "Fatty Acid Synthase Inhibition in Human Breast Cancer Cells Leads to Malonyl-CoA-Induced Inhibition of Fatty Acid Oxidation and Cytotoxicity" by Jagan N. Thupari, Michael L. Pinn, and Francis P. Kuhajda, pages 217–223 (doi:10.1006/bbrc.2001.5146) **570**
- Volume **292**, Number 3 (2002), in the article "Increased Plasma HB-EGF Associated with Obesity and Coronary Artery Disease" by Satoru Matsumoto, Ken Kishida, Iichiro Shimomura, Akira Yamada, Norikazu Maeda, Hiroyuki Nagaretani, Morihiro Matsuda, Hitoshi Nishizawa, Shinji Kihara, Shizuya Yamashita, Shinji Tamura, Sumio Kawata, Tohru Funahashi, and Yuji Matsuzawa, pages 781–786 (doi:10.1006/bbrc.2002.6720) **571**
- Volume **292**, Number 5 (2002), in the article "The Road to Squalene Synthase" by Ishaiahu Shechter, pages 1261–1266 (doi:10.1006/bbrc.2002.2025) **572**
- Volume **293**, Number 1 (2002), in the article "Lack of matrix metalloproteinase (MMP)-1 and -3 expression in Ewing sarcoma may be due to loss of accessibility of the MMP regulatory element to the specific fusion protein in vivo" by Hiroki Yabe, Mariko Fukuma, Fumihiko Urano, Koichi Yoshida, Shingo Kato, Yoshiaki Toyama, Jun-ichi Hata, and Akihiro Umezawa, pages 61–71 (doi:10.1006/S0006291X(02)001298) **573**

## Number 3, July 19, 2002

### BREAKTHROUGHS AND VIEWS

- FMR1* silencing and the signals to chromatin:  
a unified model of transcriptional regulation **Assam El-Osta** **575**

### REGULAR ARTICLES

- Gene structure of the carp fish ribosomal  
protein L41: seasonally regulated expression **Alfredo Molina, Aintzane Corta,  
Rody San Martin, Marco Alvarez,  
Luis O Burzio, Manuel Krauskopf,  
and María Inés Vera** **582**
- Protein domain of chicken  $\alpha_1$ -acid glycoprotein  
is responsible for chiral recognition **Yutaka Sadakane, Hisami Matsunaga,  
Kazuya Nakagomi, Yasumaru Hatanaka,  
and Jun Haginaka** **587**
- Antifungal mechanism of SMAP-29 (1–18)  
isolated from sheep myeloid mRNA against  
*Trichosporon beigeli* **Dong Gun Lee, Pyoung Il Kim,  
Yoonkyung Park, Seong-Cheol Park,  
Eun-Rhan Woo, and Kyung-Soo Hahm** **591**
- Ceruloplasmin carries the anionic glycan  
oligo/poly  $\alpha_2,8$  deaminoneuraminic acid **Martin Ziak, Mirjam Meier,  
Ilse Novak-Hofer, and Jürgen Roth** **597**
- Effect of Cu,Zn superoxide dismutase on  
cholesterol metabolism in human  
hepatocarcinoma (HepG2) cells **Paolo Mondola, Rosalba Serù,  
Mariarosaria Santillo, Simona Damiano,  
Maurizio Bifulco, Chiara Laezza,  
Pietro Formisano, Giuseppe Rotilio,  
and Maria Rosa Ciriolo** **603**



|                                                                                                                                     |                                                                                                                                                                                                                          |     |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Probing functionalized gold colloids for single particle tracking experiments                                                       | Frédéric Daumas, Honoré Mazarguil, Claire Millot, André Lopez, and Laurence Salomé                                                                                                                                       | 610 |
| The Pco proteins are involved in periplasmic copper handling in <i>Escherichia coli</i>                                             | Sun Mi Lee, Gregor Grass, Christopher Rensing, Siobhán R. Barrett, Christopher J.D. Yates, Jivko V. Stoyanov, and Nigel L. Brown                                                                                         | 616 |
| p53-independent apoptosis is induced by the 19 <sup>ARF</sup> tumor suppressor                                                      | Keitaro Tsuji, Kiyohisa Mizumoto, Haruka Sudo, Keisuke Kouyama, Etsuro Ogata, and Masaaki Matsuoka                                                                                                                       | 621 |
| Effects of nutrition on the cell survival and gene expression of transplanted fat tissues in mice                                   | F. Matsumoto, H. Bujo, D. Kuramochi, K. Saito, M. Shibasaki, K. Takahashi, S. Yoshimoto, M. Ichinose, and Y. Saito                                                                                                       | 630 |
| Membrane fusion induced by the major lipid-binding domain of the cytoskeletal protein talin                                         | Gerhard Isenberg, Sabine Doerhoefer, Dick Hoekstra, and Wolfgang H. Goldmann                                                                                                                                             | 636 |
| Somatic mutations in the p53 gene account for the extension of replicative life span of macaque cells                               | Yuko Shimizu and Takafumi Ishida                                                                                                                                                                                         | 644 |
| The Ras-like small GTP-binding protein Rin is activated by growth factor stimulation                                                | Mitsunobu Hoshino and Shun Nakamura                                                                                                                                                                                      | 651 |
| HIF-1 $\alpha$ -prolyl hydroxylase: molecular target of nitric oxide in the hypoxic signal transduction pathway                     | Feng Wang, Hiroki Sekine, Yasuo Kikuchi, Chikahisa Takasaki, Chisa Miura, Okuda Heiwa, Taro Shuin, Yoshiaki Fujii-Kuriyama, and Kazuhiro Sogawa                                                                          | 657 |
| C-propeptide region of human pro $\alpha$ 1 type 1 collagen interacts with thioredoxin                                              | Ken Matsumoto, Hiroshi Masutani, Akira Nishiyama, Shu Hashimoto, Yasuhiro Gon, Takashi Horie, and Junji Yodoi                                                                                                            | 663 |
| Alu DNA polymorphism in ACE gene is protective for age-related macular degeneration                                                 | Hamdi K. Hamdi, Jacob Reznik, Raquel Castellon, Shari R. Atilano, John M. Ong, Nitin Udar, Jeffrey H. Tavis, Annette M. Aoki, Anthony B. Nesburn, David S. Boyer, Kent W. Small, Donald J. Brown, and M. Cristina Kenney | 668 |
| Human CDC25B and CDC25C differ by their ability to restore a functional checkpoint response after gene replacement in fission yeast | Odile Mondesert, Bernard Ducommun, and Béatrix Bugler                                                                                                                                                                    | 673 |
| Brain-specific splicing of $\alpha$ -actinin 1 mRNA                                                                                 | Joachim Kremerskothen, Iskender Teber, Doreen Wendholt, Thomas Liedtke, Tobias M. Böckers, and Angelika Barnekow                                                                                                         | 678 |
| Internal initiation sites of de novo RNA synthesis within the hepatitis C virus polypyrimidine tract                                | Charles Pellerin, Sylvain Lefebvre, Michael J. Little, Ginette McKercher, Daniel Lamarre, and George Kukolj                                                                                                              | 682 |

|                                                                                                                                                                             |                                                                                                                 |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----|
| Post-translational processing of <i>Drosophila</i> nucleoside diphosphate kinase                                                                                            | Leisa M. Stenberg, Johan Stenflo, Paul Holmgren, and Mark A. Brown                                              | 689 |
| <i>Helicobacter pylori</i> -stimulated EGF receptor transactivation requires metalloprotease cleavage of HB-EGF                                                             | C. Wallasch, J.E. Crabtree, D. Bevec, P.A. Robinson, H. Wagner, and A. Ullrich                                  | 695 |
| Transcriptional activation and increase in expression of Alzheimer's $\beta$ -amyloid precursor protein gene is mediated by TGF- $\beta$ in normal human astrocytes         | Teralee Burton, Binhua Liang, Alex Dibrov, and Francis Amara                                                    | 702 |
| Transforming growth factor- $\beta$ -induced transcription of the Alzheimer $\beta$ -amyloid precursor protein gene involves interaction between the CTCF-complex and Smads | Teralee Burton, Binhua Liang, Alex Dibrov, and Francis Amara                                                    | 713 |
| Functional expression and analysis of the pancreatic transcription factor PDX-1 in yeast                                                                                    | Sabire Ozcan, Amber L. Mosley, and Bishwa K. Aryal                                                              | 724 |
| Klenow $\text{exo}^-$ , as opposed to $\text{exo}^+$ , traverses through G-G:C triplex by melting G-G base pairs                                                            | Sunita Ramanathan, Kandala V.R. Chary, and Basuthkar J. Rao                                                     | 730 |
| Enhanced expression of plasminogen activator inhibitor-1 by dedifferentiated thyrocytes                                                                                     | Grazyna Kotlarz, Yanusz Wegrowski, Laurent Martiny, Paul J. Declerck, and Georges Bellon                        | 737 |
| Gene silencing in mammalian cells by preformed small RNA duplexes                                                                                                           | Marianne Leirdal and Mouldy Sioud                                                                               | 744 |
| Functional interaction between the pro-apoptotic DAP3 and the glucocorticoid receptor                                                                                       | Sanna M. Hulkko and Johanna Zilliacus                                                                           | 749 |
| A new technique to co-localise membrane proteins with Homer/vesl                                                                                                            | Yoko Hiroaki, Kouki Nishikawa, Kaoru Mitsuoka, Taro Tachibana, Kenji Sobue, Tomoko Doi, and Yoshinori Fujiyoshi | 756 |
| Presenilin-1 is located in rat mitochondria                                                                                                                                 | Maria Ankarcrona and Kjell Hultenby                                                                             | 766 |

Number 4, July 26, 2002

## BREAKTHROUGHS AND VIEWS

|                                                                      |                                                               |     |
|----------------------------------------------------------------------|---------------------------------------------------------------|-----|
| Genome-wide multilocus analysis for immune-mediated complex diseases | Jong-Keuk Lee, Chan Park, Kuchan Kimm, and Mark S. Rutherford | 771 |
|----------------------------------------------------------------------|---------------------------------------------------------------|-----|

## REGULAR ARTICLES

|                                    |                                          |     |
|------------------------------------|------------------------------------------|-----|
| Ubiquitination of Ro52 autoantigen | Taeko Fukuda-Kamitani and Tetsu Kamitani | 774 |
|------------------------------------|------------------------------------------|-----|

|                                                                                                                                                                                  |                                                                                                                                                                                                                                |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Silkworm hemolymph as a potent inhibitor of apoptosis in Sf9 cells                                                                                                               | Won Jong Rhee, Eun Jeong Kim, and Tai Hyun Park                                                                                                                                                                                | 779 |
| Downregulation of Wilms' tumor 1 protein inhibits breast cancer proliferation                                                                                                    | Pablo Zapata-Benavides, Musaffe Tuna, Gabriel Lopez-Berestein, and Ana M. Tari                                                                                                                                                 | 784 |
| Conotoxin MI inhibits the $\alpha$ - $\delta$ acetylcholine binding site of the <i>Torpedo marmorata</i> receptor                                                                | Leonardo M. Cortez, Sergio G. del Canto, Fernando D. Testai, and Mirtha J. Biscoglio de Jiménez Bonino                                                                                                                         | 791 |
| An anionic antimicrobial peptide from toad <i>Bombina maxima</i>                                                                                                                 | Ren Lai, Hen Liu, Wen Hui Lee, and Yun Zhang                                                                                                                                                                                   | 796 |
| Tyrosine phosphorylation of maspin in normal mammary epithelia and breast cancer cells                                                                                           | Valerie A. Odero-Marah, Zhila Khalkhali-Ellis, Galen B. Schneider, Elisabeth A. Seftor, Richard E.B. Seftor, John G. Koland, and Mary J.C. Hendrix                                                                             | 800 |
| Effect of luminal and extravesicular $\text{Ca}^{2+}$ on NAADP binding and release properties                                                                                    | Judit Bak, Richard A. Billington, and Armando A. Genazzani                                                                                                                                                                     | 806 |
| Role of <i>cis</i> prolines 112 and 126 in the functional activity of ribonucleolytic toxin restrictocin                                                                         | Anita Goyal, Divya Seth, and Janendra K. Batra                                                                                                                                                                                 | 812 |
| A novel amylolytic enzyme from <i>Thermotoga maritima</i> , resembling cyclodextrinase and $\alpha$ -glucosidase, that liberates glucose from the reducing end of the substrates | Myoung-Hee Lee, Young-Wan Kim, Tae-Jip Kim, Cheon-Seok Park, Jung-Wan Kim, Tae-Wha Moon, and Kwan-Hwa Park                                                                                                                     | 818 |
| The complete amino acid sequence of the pediocin-like antimicrobial peptide leucocin C                                                                                           | Gunnar Fimland, Knut Sletten, and Jon Nissen-Meyer                                                                                                                                                                             | 826 |
| Cross-linked crystals of chloroperoxidase                                                                                                                                        | Marcela Ayala, Eduardo Horjales, Michael A. Pickard, and Rafael Vazquez-Duhalt                                                                                                                                                 | 828 |
| Reversal of P-glycoprotein-mediated multidrug resistance by 5,6,7,3',4'-pentamethoxyflavone (Sinensetin)                                                                         | Cheol-Hee Choi, Kyung-Hoon Sun, Chun-San An, Jin-Cheol Yoo, Kyung-Soo Hahm, In-Hwa Lee, Jae-Kyung Sohng, and Youn-Chul Kim                                                                                                     | 832 |
| SVK14 cells express an MCH binding site different from the MCH <sub>1</sub> or MCH <sub>2</sub> receptor                                                                         | Valérie Audinot, Chantal Lahaye, Thomas Suply, Carole Rovère-Jovène, Marianne Rodriguez, Jean-Paul Nicolas, Philippe Beauverger, Bruno Cardinaud, Jean-Pierre Galizzi, Jean-Luc Fauchère, Jean-Louis Nahon, and Jean A. Boutin | 841 |
| Cloning and characterization of two novel zebrafish P2X receptor subunits                                                                                                        | Miguel Diaz-Hernandez, Jane A. Cox, Keisuke Migita, William Haines, Terrance M. Egan, and Mark M. Voigt                                                                                                                        | 849 |
| Distinct roles of $\alpha$ A- and $\alpha$ B-crystallins under thermal and UV stresses                                                                                           | Jiahn-Haur Liao, Jiahn-Shing Lee, and Shyh-Horng Chiou                                                                                                                                                                         | 854 |
| Identification and characterization of two novel zinc finger genes, <i>ZNF359</i> and <i>ZFP28</i> , in human development                                                        | Liang Zhou, Chuanbing Zhu, Kaimei Luo, Yongqing Li, Hualiang Pi, Wuzhou Yuan, Yuequn Wang, Chunxia Huang, Mingyao Liu, and Xiushan Wu                                                                                          | 862 |



|                                                                                                                                                                                              |                                                                                                                                                                                                                 |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Model mice for Presbyterian hemoglobinopathy (Asn <sup>β108</sup> → Lys) confer hemolytic anemia with altered oxygen affinity and instability of Hb                                          | <b>Yo-ichi Suzuki, Takahiko Shimizu, Hiromi Sakai, Masakatsu Tamaki, Ken-ichi Koizumi, Takayuki Kuriyama, Eishun Tsuchida, Haruhiko Koseki, and Takuji Shirasawa</b>                                            | <b>869</b> |
| Lys 43 and Asp 46 in α-helix 3 of uteroglobin are essential for its phospholipase A <sub>2</sub> -inhibitory activity                                                                        | <b>Bhabadeb Chowdhury, Giuditta Mantile-Selvaggi, Lucio Miele, Eleonora Cordella-Miele, Zhongjian Zhang, and Anil B. Mukherjee</b>                                                                              | <b>877</b> |
| Enzymatic properties of a new peptide deformylase from pathogenic bacterium <i>Leptospira interrogans</i>                                                                                    | <b>Yikun Li, Zhifeng Chen, and Weimin Gong</b>                                                                                                                                                                  | <b>884</b> |
| Expression studies of two paralogous <i>ppa</i> genes encoding distinct Family I pyrophosphatases in marine unicellular cyanobacteria reveal inactivation of the typical cyanobacterial gene | <b>María R. Gómez-García and Aurelio Serrano</b>                                                                                                                                                                | <b>890</b> |
| Synergistic activity of fibronectin and fibroblast growth factor receptors on neuronal adhesion and neurite extension through extracellular signal-regulated kinase pathway                  | <b>Pill-Hoon Choung, Byoung-Moo Seo, Chong-Pyoung Chung, Kenneth M. Yamada, and Jun-Hyeog Jang</b>                                                                                                              | <b>898</b> |
| Enhanced detection and characterization of protocatechuate 3,4-dioxygenase in <i>Acinetobacter lwoffii</i> K24 by proteomics using a column separation                                       | <b>Hyung-Yeel Kahng, Kun Cho, Seung-Yual Song, Soo-Jung Kim, Sun-Hee Leem, and Seung Il Kim</b>                                                                                                                 | <b>903</b> |
| Identification of putative mammalian D-lactate dehydrogenase enzymes                                                                                                                         | <b>Matthew J. Flick and Stephen F. Konieczny</b>                                                                                                                                                                | <b>910</b> |
| Role of dietary phosphorus in the progression of renal failure                                                                                                                               | <b>Tomohide Koizumi, Kazuya Murakami, Haruyuki Nakayama, Tomomi Kuwahara, and Yoshinari Ohnishi</b>                                                                                                             | <b>917</b> |
| Involvement of in vivo induced <i>icmF</i> gene of <i>Vibrio cholerae</i> in motility, adherence to epithelial cells, and conjugation frequency                                              | <b>Soumita Das, Amit Chakraborty, Rajat Banerjee, and Keya Chaudhuri</b>                                                                                                                                        | <b>922</b> |
| Effect of hypoxia on excitatory transmission in the rat substantia gelatinosa neurons                                                                                                        | <b>Yun Kyung Park, Sung Jun Jung, Jiyeon Kwak, and Jun Kim</b>                                                                                                                                                  | <b>929</b> |
| TNF-α-mediated apoptosis in chondrocytes sensitized by MG132 or actinomycin D                                                                                                                | <b>Hyun A. Kim and Yeong W. Song</b>                                                                                                                                                                            | <b>937</b> |
| Human mitochondrial transcription factor A binds preferentially to oxidatively damaged DNA                                                                                                   | <b>Yoichiro Yoshida, Hiroto Izumi, Tomoko Ise, Hidetaka Uramoto, Takayuki Torigoe, Hiroshi Ishiguchi, Tadashi Murakami, Mizuho Tanabe, Yoshifumi Nakayama, Hideaki Itoh, Hiroshi Kasai, and Kimitoshi Kohno</b> | <b>945</b> |
| Heterologous expression and purification of SpaB involved in subtilin biosynthesis                                                                                                           | <b>Lili Xie, Champak Chatterjee, Rashna Balsara, Nicole M. Okeley, and Wilfred A. van der Donk</b>                                                                                                              | <b>952</b> |

|                                                                                                                                                                              |                                                                                                                                                                                           |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Highly specific inactivation of triosephosphate isomerase from <i>Trypanosoma cruzi</i>                                                                                      | Alfredo Téllez-Valencia,<br>Santiago Ávila-Ríos, Ruy Pérez-Montfort,<br>Adela Rodríguez-Romero,<br>Marieta Tuena de Gómez-Puyou,<br>Francisco López-Calahorra,<br>and Armando Gómez-Puyou | 958  |
| c-Fos is a surface pressure-dependent diverter of phospholipase activity                                                                                                     | Graciela A. Borioli, María L. Fanani,<br>Beatriz L. Caputto, and Bruno Maggio                                                                                                             | 964  |
| Hrp3, a chromodomain helicase/ATPase DNA binding protein, is required for heterochromatin silencing in fission yeast                                                         | Eung Jae Yoo, Yeun Kyu Jang,<br>Myung Ae Lee, Pernilla Bjerling,<br>Jae Bum Kim, Karl Ekwall,<br>Rho Hyun Seong, and Sang Dai Park                                                        | 970  |
| Affinity of carbon monoxide to hemoglobin increases at low oxygen fractions                                                                                                  | Martin Westphal, Thomas Peter Weber,<br>Jörg Meyer, Stefan von Kegler,<br>Hugo Van Aken, and Michael Booke                                                                                | 975  |
| Uptake of lead and iron by divalent metal transporter 1 in yeast and mammalian cells                                                                                         | Desmond I. Bannon, Matthew E. Portnoy,<br>Luisa Olivi, Peter S.J. Lees,<br>Valeria C. Culotta, and Joseph P. Bressler                                                                     | 978  |
| Monocyte-derived soluble protein confers 5-lipoxygenase activity $\text{Ca}^{2+}$ -dependent                                                                                 | Eva Bürkert, Olof Rådmark,<br>Dieter Steinhilber, and Oliver Werz                                                                                                                         | 985  |
| C-terminal modification of 6-phosphofructo-1-kinase from <i>Saccharomyces cerevisiae</i> and its influence on enzyme structure and activity                                  | Anke Edelmann, Jürgen Kirchberger,<br>Jürgen J. Heinisch,<br>and Gerhard Kopperschlager                                                                                                   | 992  |
| Expression and binding properties of the two mannose-6-phosphate receptors differ during perinatal development in rat liver                                                  | Patricia S. Romano, Ana C. López,<br>María L. Mariani, Tirso Sartor,<br>Silvia A. Belmonte, and Miguel A. Sosa                                                                            | 1000 |
| Galactose-binding lectin from the seeds of champedak ( <i>Artocarpus integer</i> ): sequences of its subunits and interactions with human serum O-glycosylated glycoproteins | Mariati Abdul Rahman,<br>Saiful Anuar Karsani, Iekhsan Othman,<br>Puteri Shafinaz Abdul Rahman,<br>and Onn Haji Hashim                                                                    | 1007 |
| Upregulation of monocyte chemoattractant protein 1 and effects of transforming growth factor- $\beta$ 1 in Peyronie's disease                                                | Ching-Shwun Lin, Guiting Lin,<br>Zhong Wang, Suzan A. Maddah,<br>and Tom F. Lue                                                                                                           | 1014 |
| An unusual orientation for Tyr75 in the active site of the aspartic proteinase from <i>Saccharomyces cerevisiae</i>                                                          | Alla Gustchina, Mi Li, Lowri H. Phylip,<br>Wendy E. Lees, John Kay,<br>and Alexander Wlodawer                                                                                             | 1020 |
| Immunomagnetic capture of lens membrane fractions containing steroid binding protein                                                                                         | Patricia S. Sexton<br>and Richard J. Cenedella                                                                                                                                            | 1027 |

## ERRATA

|                                                                                                                                                                                                                                                                          |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Volume 293, Number 2 (2002), in the article "Cloning, sequencing, and expression analysis of the porcine uroplakin II gene" by Deug-Nam Kwon, Han Geuk Seo, and Jin-Hoi Kim, pages 862–869 (doi:10.1006/S0006291X(02)00295-4)                                            | 1032 |
| Volume 294, Number 3 (2002), in the article "Shear stress mediates tyrosylprotein sulfotransferase isoform shift in human endothelial cells" by Sandra Goettsch, Winfried Goettsch, Henning Morawietz, and Peter Bayer, pages 541–546 (doi:10.1006/S0006291X(02)00511-9) | 1033 |

- Volume **294**, Number 5 (2002), in the article "Keratin degradation: a cooperative action of two enzymes from *Stenotrophomonas* sp." by Shohei Yamamura, Yasutaka Morita, Quamrul Hasan, Kenji Yokoyama, and Eiichi Tamiya, pages 1138–1143 (doi:10.1006/S0006291X(02)00580-6) **1034**

**Number 5, August 2, 2002**

**BREAKTHROUGHS AND VIEWS**

- Molecular effects of proinsulin C-peptide **Jan Johansson, Karin Ekberg, Jawed Shafqat, Mikael Henriksson, Alexander Chibalin, John Wahren, and Hans Jörnvall** **1035**

**REGULAR ARTICLES**

- Octadecanoid signaling component "burst" in rice (*Oryza sativa* L.) seedling leaves upon wounding by cut and treatment with fungal elicitor chitosan **Randeep Rakwal, Shigeru Tamogami, Ganesh K. Agrawal, and Hitoshi Iwahashi** **1041**
- Glutaredoxins catalyze the reduction of glutathione by dihydrolipoamide with high efficiency **Pablo Porras, José R. Pedrajas, Emilia Martínez-Galisteo, C. Alicia Padilla, Catrine Johansson, Arne Holmgren, and J. Antonio Bárcena** **1046**
- Fenofibrate induces a selective increase of protein-bound homocysteine in rodents: a PPAR $\alpha$ -mediated effect **Christiane Legendre, Elisabeth Caussé, Evelyne Chaput, R. Salvayre, Thierry Pineau, and Alan D. Edgar** **1052**
- Angiotensin-converting enzyme inhibitor therapy prevents upregulation of endothelin-converting enzyme-1 in failing human myocardium **H. Morawietz, W. Goettsch, M. Szibor, M. Barton, S. Shaw, K. Hakim, H.-R. Zerkowski, and J. Holtz** **1057**
- Sulfur mustard-induced arachidonic acid release is mediated by phospholipase D in human keratinocytes **Lee J. Lefkowitz and William J. Smith** **1062**
- Induction of I $\kappa$ B: atrial natriuretic peptide as a regulator of the NF- $\kappa$ B pathway **Alexandra K. Kiemer, Nina C. Weber, and Angelika M. Vollmar** **1068**
- Fibronectin transcription in liver cells: promoter occupation and function in sinusoidal endothelial cells and hepatocytes **Claudio R. Alonso, Jacob George, C. Gustavo Pesce, D. Montgomery Bissell, and Alberto R. Kornblihtt** **1077**
- IGF-I induces caveolin 1 tyrosine phosphorylation and translocation in the lipid rafts **Davide Maggi, Claudia Biedi, Daniela Segat, Daniela Barbero, Danilo Panetta, and Renzo Cordera** **1085**
- Regulation of the 26S proteasome activities by peptides mimicking cleavage products **David Papapostolou, Olivier Coux, and Michèle Reboud-Ravaux** **1090**



|                                                                                                                               |                                                                                                                                                                           |             |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Cross talk of two Kruppel transcription factors regulates expression of the ovine FSH receptor gene                           | <b>Weirong Xing and M. Ram Sairam</b>                                                                                                                                     | <b>1096</b> |
| A new and sensitive method for the quantification of HBV cccDNA by real-time PCR                                              | <b>Ming-Liang He, Jun Wu, Ying Chen, Marie C. Lin, George K.K. Lau, and Hsiang-fu Kung</b>                                                                                | <b>1102</b> |
| Differential cytoskeletal association of ErbB1 and ErbB2 during keratinocyte differentiation                                  | <b>Sanjay Kansra, Stefan W. Stoll, and James T. Elder</b>                                                                                                                 | <b>1108</b> |
| Human thyroperoxidase folds in one complex B-cell immunodominant region                                                       | <b>Stéphanie Blanchin, Valérie Estienne, Jin Guo, Basil Rapoport, Sandra M. McLachlan, Pierre Carayon, and Jean Ruf</b>                                                   | <b>1118</b> |
| Dynamic and biphasic modulation of nitrosation reaction by superoxide dismutases                                              | <b>Teh-Min Hu, William L. Hayton, Mark A. Morse, and Susan R. Mallery</b>                                                                                                 | <b>1125</b> |
| Drm/Gremlin transcriptionally activates p21 <sup>Cip1</sup> via a novel mechanism and inhibits neoplastic transformation      | <b>Bo Chen, Meropi Athanasiou, Qiuping Gu, and Donald G. Blair</b>                                                                                                        | <b>1135</b> |
| Deletions of SKY1 or PTK2 in the <i>Saccharomyces cerevisiae trk1Δtrk2Δ</i> mutant cells exert dual effect on ion homeostasis | <b>Omri Erez and Chaim Kahana</b>                                                                                                                                         | <b>1142</b> |
| Neutrophil capture by selectins on endothelial cells exposed to cigarette smoke                                               | <b>P.C.W. Stone, A.C. Fisher, G.E. Rainger, and G.B. Nash</b>                                                                                                             | <b>1150</b> |
| Adenoviral overexpression of apolipoprotein A-V reduces serum levels of triglycerides and cholesterol in mice                 | <b>Hendrik N. van der Vliet, Frank G. Schaap, Johannes H.M. Levels, Roelof Ottenhoff, Norbert Looije, John G. Wesseling, Albert K. Groen, and Robert A.F.M. Chamuleau</b> | <b>1156</b> |
| Author Index for Volume 295                                                                                                   |                                                                                                                                                                           | <b>1160</b> |

**Volume 296, Number 1, August 9, 2002**

**BREAKTHROUGHS AND VIEWS**

- |                                                                                                     |                        |          |
|-----------------------------------------------------------------------------------------------------|------------------------|----------|
| Autonomous and heteronomous positioning of transmembrane segments in multispanning membrane protein | <b>Masao Sakaguchi</b> | <b>1</b> |
|-----------------------------------------------------------------------------------------------------|------------------------|----------|

**INTERVIEW**

- |                                      |                        |          |
|--------------------------------------|------------------------|----------|
| A conversation with Frank Westheimer | <b>K. Noelle Gracy</b> | <b>5</b> |
|--------------------------------------|------------------------|----------|

**REGULAR ARTICLES**

- |                                                                                                                                                                                                          |                                                                                                                                                                                              |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Stabilization of FtsH-unfolded protein complex by binding of ATP and blocking of protease                                                                                                                | <b>Hisayoshi Makyio, Hajime Niwa, Ken Motohashi, Hideki Taguchi, and Masasuke Yoshida</b>                                                                                                    | <b>8</b>  |
| Cyclin H is a new binding partner for protein kinase CK2                                                                                                                                                 | <b>Michael Faust, Sabine Kartarius, Sandra L. Schwindling, and Mathias Montenarh</b>                                                                                                         | <b>13</b> |
| Bcl-2 blocks apoptosis caused by pierisin-1, a guanine-specific ADP-ribosylating toxin from the cabbage butterfly                                                                                        | <b>Takashi Kanazawa, Takuo Kono, Masahiko Watanabe, Yuko Matsushima-Hibiya, Tsuyoshi Nakano, Kotaro Koyama, Noriaki Tanaka, Takashi Sugimura, and Keiji Wakabayashi</b>                      | <b>20</b> |
| Modulation of the expression of membrane-bound CD54 (mCD54) and soluble form of CD54 (sCD54) in endothelial cells by glucosyl transferase inhibitor: possible role of ceramide for the shedding of mCD54 | <b>Atsushi Kawakami, Ayumi Hida, Satoshi Yamasaki, Taiichiro Miyashita, Koto Nakashima, Fumiko Tanaka, Hiroaki Ida, Masako Furuyama, Kiyoshi Migita, Tomoki Origuchi, and Katsumi Eguchi</b> | <b>26</b> |
| <i>N</i> <sup>ε</sup> -(Carboxymethyl)lysine induces $\gamma$ -glutamylcysteine synthetase in RAW264.7 cells                                                                                             | <b>Yoshiyuki Miyahara, Satoshi Ikeda, Takahiro Muroya, Chie Yasuoka, Yoshishige Urata, Seikoh Horiuchi, Shigeru Kohno, and Takahito Kondo</b>                                                | <b>32</b> |
| Tripeptidyl-peptidase II expression and activity are increased in skeletal muscle during sepsis                                                                                                          | <b>Curtis J. Wray, Birgitta Tomkinson, Bruce W. Robb, and Per-Olof Hasselgren</b>                                                                                                            | <b>41</b> |
| Up-regulation of human deoxyribonuclease II gene expression during myelomonocytic differentiation of HL-60 and THP-1 cells                                                                               | <b>San-Fang Chou, Hui-Ling Chen, and Shao-Chun Lu</b>                                                                                                                                        | <b>48</b> |

|                                                                                                                                                          |                                                                                                                                                                                  |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Nuclear translocation of extracellular superoxide dismutase                                                                                              | Tomomi Ookawara, Takako Kizaki, Eiji Takayama, Nobuo Imazeki, Osamu Matsubara, Yoshitaka Ikeda, Keiichiro Suzuki, Li Li Ji, Takushi Tadakuma, Naoyuki Taniguchi, and Hideki Ohno | 54  |
| Insulin-like growth factor I receptor is expressed at normal levels in Nijmegen breakage syndrome cells                                                  | Hiroshi Watanabe, Dong Yu, Takehito Sasaki, Hitoshi Shibuya, Yoshio Hosoi, Minoru Asada, Kenshi Komatsu, and Masahiko Miura                                                      | 62  |
| Paternal imprinting of $G\alpha_s$ in the human thyroid as the basis of TSH resistance in pseudohypoparathyroidism type 1a                               | Emily L. Germain-Lee, Chang-Lin Ding, Zhichao Deng, Janet L. Crane, Motoyasu Saji, Matthew D. Ringel, and Michael A. Levine                                                      | 67  |
| Matrix metalloproteinase-2 is involved in A549 cell migration on laminin-10/11                                                                           | J. Gu, R. Nishiuchi, and K. Sekiguchi                                                                                                                                            | 73  |
| The role of the N-terminal propeptide of the pro-aminopeptidase processing protease: refolding, processing, and enzyme inhibition                        | Bing Tang, Satoru Nirasawa, Motomitsu Kitaoka, and Kiyoshi Hayashi                                                                                                               | 78  |
| Role of Dbp's big sister in the anti-mitogenic pathway from $\alpha 1B$ -adrenergic receptor to c-Jun N-terminal kinase                                  | Junji Yamauchi, Akira Hirasawa, Yuki Miyamoto, Hiroshi Kokubu, Hiroko Nishii, Miyuki Okamoto, Yo Sugawara, Gozoh Tsujimoto, and Hiroshi Itoh                                     | 85  |
| High glucose-induced replicative senescence: point of no return and effect of telomerase                                                                 | Shraga Blazer, Eli Khankin, Yardena Segev, Rachel Ofir, Michal Yalon-Hacohen, Zipora Kra-Oz, Yossi Gottfried, Sarit Larisch, and Karl L. Skorecki                                | 93  |
| Neutralizing antibodies against oncogenic human papillomavirus as a possible determinant of the fate of low-grade cervical intraepithelial neoplasia     | Kei Kawana, Toshiharu Yasugi, Tadahito Kanda, Yukiko Kawana, Yasuo Hirai, Hiroyuki Yoshikawa, and Yuji Taketani                                                                  | 102 |
| SHIP2 overexpression strongly reduces the proliferation rate of K562 erythroleukemia cell line                                                           | Sylvie Giuriato, Daniel Blero, Bernard Robaye, Catherine Bruyns, Bernard Payrastre, and Christophe Erneux                                                                        | 106 |
| The E-box like sterol regulatory element mediates the suppression of human $\Delta$ -6 desaturase gene by highly unsaturated fatty acids                 | Takayuki Y. Nara, Wei Song He, Chongren Tang, Steven D. Clarke, and Manabu T. Nakamura                                                                                           | 111 |
| Transcription coactivator CBP has direct DNA binding activity and stimulates transcription factor DNA binding through small domains                      | Chao-Zhong Song, Kimberly Keller, Yangchao Chen, Ken Murata, and George Stamatoyannopoulos                                                                                       | 118 |
| Serum-free differentiation of 3T3-L1 preadipocytes is characterized by only transient expression of peroxisome proliferator-activated receptor- $\gamma$ | Harald Staiger, Hans-Ulrich Häring, and Georg Löffler                                                                                                                            | 125 |



|                                                                                                                               |                                                                                                                                                                                                  |            |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Modulation of hypothalamic hypocretin/orexin mRNA expression by glucocorticoids                                               | <b>Alain Stricker-Krongrad and Bernard Beck</b>                                                                                                                                                  | <b>129</b> |
| Hemodynamic effects of exogenous adrenomedullin in healthy and endotoxemic sheep                                              | <b>Martin Westphal, Henning Stubbe, Hans-Georg Bone, Fritz Daudel, Sebastian Vocke, Hugo Van Aken, and Michael Boone</b>                                                                         | <b>134</b> |
| Effects of hyperactive Janus kinase 2 signaling in mammary epithelial cells                                                   | <b>Hanne Olsen, Malin A. Hedengran Faulds, Pipsa Saharinen, Olli Silvennoinen, and Lars-Arne Haldosén</b>                                                                                        | <b>139</b> |
| Epididymis is a novel site of erythropoietin production in mouse reproductive organs                                          | <b>Toshihiro Kobayashi, Haruko Yanase, Toshihiko Iwanaga, Ryuzo Sasaki, and Masaya Nagao</b>                                                                                                     | <b>145</b> |
| Gene amplification profiling of esophageal squamous cell carcinomas by DNA array CGH                                          | <b>Tomoki Ishizuka, Chikako Tanabe, Hiromi Sakamoto, Kazuhiko Aoyagi, Masahiko Maekawa, Norio Matsukura, Akira Tokunaga, Takashi Tajiri, Teruhiko Yoshida, Masaaki Terada, and Hiroki Sasaki</b> | <b>152</b> |
| Structural characterization of the second TSP1-module of human thrombospondin                                                 | <b>Emőke Roszmusz, András Patthy, Mária Trexler, and László Patthy</b>                                                                                                                           | <b>156</b> |
| Atomic resolution structure of the major endoglucanase from <i>Thermoascus aurantiacus</i>                                    | <b>F. Van Petegem, I. Vandenberghe, M.K. Bhat, and J. Van Beeumen</b>                                                                                                                            | <b>161</b> |
| A novel antimicrobial function for a ribosomal peptide from rainbow trout skin                                                | <b>Jorge M.O. Fernandes and Valerie J. Smith</b>                                                                                                                                                 | <b>167</b> |
| Characterization of human <i>CYP1A1/1A2</i> induction by DNA microarray and $\alpha$ -naphthoflavone                          | <b>Seiichi Ishida, Hideto Jinno, Toshiko Tanaka-Kagawa, Masanori Ando, Yasuo Ohno, Shogo Ozawa, and Jun-ichi Sawada</b>                                                                          | <b>172</b> |
| Human platelets contain p110 $\delta$ phosphoinositide 3-kinase                                                               | <b>Jin Zhang, Bart Vanhaesebroeck, and Susan E. Rittenhouse</b>                                                                                                                                  | <b>178</b> |
| Alteration of cellular phosphorylation state affects vitamin D receptor-mediated <i>CYP3A4</i> mRNA induction in Caco-2 cells | <b>Hirokazu Hara, Yoko Yasunami, and Tetsuo Adachi</b>                                                                                                                                           | <b>182</b> |
| Fatty acids potentiate interleukin-1 $\beta$ toxicity in the $\beta$ -cell line INS-1E                                        | <b>M. Aarnes, S. Schønberg, and V. Grill</b>                                                                                                                                                     | <b>189</b> |
| Activation and suppression of renin-angiotensin system in human dendritic cells                                               | <b>Natalia Lapteva, Kazuki Ide, Mie Nieda, Yoshitaka Ando, Yoko Hatta-Ohashi, Mutsuhiko Minami, Grigory Dymshits, Koichi Egawa, Takeo Juji, and Katsushi Tokunaga</b>                            | <b>194</b> |
| Both tissue inhibitors of metalloproteinases-1 (TIMP-1) and TIMP-2 activate Ras but through different pathways                | <b>Ting Wang, Kyoko Yamashita, Kazushi Iwata, and Taro Hayakawa</b>                                                                                                                              | <b>201</b> |

|                                                                                                                     |                                                                                                                                                  |     |
|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| A novel human SCAN/(Cys)2(His)2 zinc-finger transcription factor <i>ZNF323</i> in early human embryonic development | Hualiang Pi, Yongqing Li,<br>Chuanbing Zhu, Liang Zhou,<br>Kaimei Luo, Wuzhou Yuan,<br>Zhengfang Yi, Yuequn Wang, Xiushan Wu,<br>and Mingyao Liu | 206 |
| Negative regulation of EphA2 receptor by Cbl                                                                        | You-jie Wang, Satoshi Ota,<br>Hideki Kataoka, Masao Kanamori,<br>Zhong-you Li, Hamid Band,<br>Masamitsu Tanaka,<br>and Haruhiko Sugimura         | 214 |
| $\beta$ -Catenin regulates expression of cyclooxygenase-2 in articular chondrocytes                                 | Song-Ja Kim, Dae-Seong Im,<br>Seon-Hee Kim, Je-Hwang Ryu,<br>Sang-Gu Hwang, Je-Kyung Seong,<br>Churl-Hong Chun, and Jang-Soo Chun                | 221 |

## ERRATUM

|                                                                                                                                                                                                                                                                                                                                        |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Volume <b>290</b> , Number 4 (2002), in the article “Kinetic Analysis of C-Terminally Truncated RNA-Dependent RNA Polymerase of Hepatitis C Virus” by Takahito Kashiwagi, Koyu Hara, Michinori Kohara, Kyoko Kohara, Jun Iwahashi, Nobuyuki Hamada, Haruhito Yoshino, and Tetsuya Toyoda, pages 1188–1194 (doi:10.1006/bbrc.2001.6333) | 227 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

## Number 2, August 16, 2002

## BREAKTHROUGHS AND VIEWS

|                                                                                                                                                                                                                                                          |                                                                                              |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----|
| Rebuttal to Deacon and Holst: “Metformin effects on dipeptidyl peptidase IV degradation of glucagon-like peptide-1” versus “Dipeptidyl peptidase inhibition as an approach to the treatment and prevention of type 2 diabetes: a historical perspective” | Hans-Ulrich Demuth, Simon A. Hinke,<br>Raymond A. Pederson,<br>and Christopher H.S. McIntosh | 229 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----|

## REGULAR ARTICLES

|                                                                                                                                                    |                                                                                                                                                              |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Dioxin catabolic genes are dispersed on the <i>Terrabacter</i> sp. DBF63 genome                                                                    | Hideaki Nojiri, Mayuko Kamakura,<br>Masaaki Urata, Takahiro Tanaka,<br>Jin-Sung Chung, Tetsuo Takemura,<br>Takako Yoshida, Hiroshi Habe,<br>and Toshio Omori | 233 |
| An effective anticonvulsant prepared following a host–guest strategy that uses hydroxypropyl- $\beta$ -cyclodextrin and benzaldehyde semicarbazone | Heloisa Beraldo, Rubén D. Sinisterra,<br>Leticia R. Teixeira, Rafael P. Vieira,<br>and Maria Carolina Doretto                                                | 241 |
| Inhibitory effect of ginsenosides on NMDA receptor-mediated signals in rat hippocampal neurons                                                     | Sunoh Kim, Kwangseog Ahn,<br>Tae Hwan Oh, Seung-Yeol Nah,<br>and Hyewhon Rhim                                                                                | 247 |

|                                                                                                                                                                                                  |                                                                                                                                                                                                                                 |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| $\beta$ 2-Integrin and lipid modifications indicate a non-antioxidant mechanism for the anti-atherogenic effect of dietary coenzyme Q10                                                          | <b>Mikael Turunen, Lena Wehlin, Mats Sjöberg, Joachim Lundahl, Gustav Dallner, Kerstin Brismar, and Pavel J. Sindelar</b>                                                                                                       | <b>255</b> |
| Lactoferrin reduces in vitro osteoclast differentiation and resorbing activity                                                                                                                   | <b>Florence Lorget, Jennifer Clough, Manuel Oliveira, Marc-Cedric Daury, Afsie Sabokbar, and Elizabeth Offord</b>                                                                                                               | <b>261</b> |
| Transforming growth factor- $\beta$ 1 modulates matrix metalloproteinase-9 production through the Ras/MAPK signaling pathway in transformed keratinocytes                                        | <b>Juan Francisco Santibáñez, Javier Guerrero, Miguel Quintanilla, Angels Fabra, and Jorge Martínez</b>                                                                                                                         | <b>267</b> |
| Expression of cyclin D1 and CDK4 causes hypertrophic growth of cardiomyocytes in culture: a possible implication for cardiac hypertrophy                                                         | <b>Mimi Tamamori-Adachi, Hiroshi Ito, Kiyoshi Nobori, Kentaro Hayashida, Junya Kawauchi, Susumu Adachi, Masa-Aki Ikeda, and Shigetaka Kitajima</b>                                                                              | <b>274</b> |
| A prostate-derived cDNA that is mapped to human chromosome 19 encodes a novel protein                                                                                                            | <b>Chiang Wang, Ida M. McCarty, Louisa Balazs, Yi Li, and Mitchell S. Steiner</b>                                                                                                                                               | <b>281</b> |
| <i>Drosophila crooked-neck</i> protein co-fractionates in a multiprotein complex with splicing factors                                                                                           | <b>Sophie Raisin-Tani and Pierre Léopold</b>                                                                                                                                                                                    | <b>288</b> |
| Fenofibrate lowers abdominal and skeletal adiposity and improves insulin sensitivity in OLETF rats                                                                                               | <b>H.J. Lee, S.S. Choi, M.K. Park, Y.J. An, S.Y. Seo, M.C. Kim, S.H. Hong, T.H. Hwang, D.Y. Kang, A.J. Garber, and D.K. Kim</b>                                                                                                 | <b>293</b> |
| Expression and biological activity of Baculovirus generated wild-type human slow $\alpha$ tropomyosin and the Met9Arg mutant responsible for a dominant form of nemaline myopathy                | <b>P. Anthony Akkari, Yuhua Song, Sarah Hitchcock-DeGregori, Lori Blechynden, and Nigel Laing</b>                                                                                                                               | <b>300</b> |
| A Rho GDP-dissociation inhibitor is involved in cytokinesis of <i>Dictyostelium</i>                                                                                                              | <b>Keita Imai, Toshiro Kijima, Yoichi Noda, Kazuo Sutoh, Koji Yoda, and Hiroyuki Adachi</b>                                                                                                                                     | <b>305</b> |
| FAD-linked presenilin-1 mutants impede translation regulation under ER stress                                                                                                                    | <b>Yuka Yasuda, Takashi Kudo, Taiichi Katayama, Kazunori Imaizumi, Misako Yatera, Masayasu Okochi, Hidenaga Yamamori, Naohiko Matsumoto, Takayuki Kida, Akio Fukumori, Masayo Okumura, Masaya Tohyama, and Masatoshi Takeda</b> | <b>313</b> |
| The murine BTB/POZ zinc finger gene <i>Znf131</i> : predominant expression in the developing central nervous system, in adult brain, testis, and thymus                                          | <b>R. Trappe, P. Buddenberg, J. Uedelhoven, B. Gläser, A. Buck, W. Engel, and P. Burfeind</b>                                                                                                                                   | <b>319</b> |
| Localization of Fas ligand in cytoplasmic granules of CD8 <sup>+</sup> cytotoxic T lymphocytes and natural killer cells: participation of Fas ligand in granule exocytosis model of cytotoxicity | <b>Yuko Kojima, Akemi Kawasaki-Koyanagi, Noriyoshi Sueyoshi, Atsushi Kanai, Hideo Yagita, and Ko Okumura</b>                                                                                                                    | <b>328</b> |



|                                                                                                                                              |                                                                                                                                              |            |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Differential expression of Prx I and II in mouse testis and their up-regulation by radiation                                                 | <b>Keesook Lee, Ji-Sun Park, Yun-Jeong Kim, Yong Soo Lee, Tae Sook Hwang, Dae-Joong Kim, Eun-Mi Park, and Young-Mee Park</b>                 | <b>337</b> |
| Overexpression of PH-4, a novel putative proline 4-hydroxylase, modulates activity of hypoxia-inducible transcription factors                | <b>Felix Oehme, Peter Ellinghaus, Peter Kolkhof, Timothy J. Smith, Shyam Ramakrishnan, Joachim Hütter, Matthias Schramm, and Ingo Flamme</b> | <b>343</b> |
| Effects of low-intensity prolonged exercise on PGC-1 mRNA expression in rat epitrochlearis muscle                                            | <b>Shin Terada, Masahide Goto, Miyuki Kato, Kentaro Kawanaka, Teruhiko Shimokawa, and Izumi Tabata</b>                                       | <b>350</b> |
| Cloning of two new splice variants of Siglec-10 and mapping of the interaction between Siglec-10 and SHP-1                                   | <b>Friederike Kitzig, Águeda Martínez-Barriocanal, Miguel López-Botet, and Joan Sayós</b>                                                    | <b>355</b> |
| Overexpression of cyclin E does not influence homologous recombination in Chinese hamster cells                                              | <b>Cecilia Lundin, Magnus K.R. Samuelsson, and Thomas Helleday</b>                                                                           | <b>363</b> |
| Cell-specific phosphorylation of Zfh1 transcription factor                                                                                   | <b>Mary E. Costantino, Randi P. Stearman, Gregory E. Smith, and Douglas S. Darling</b>                                                       | <b>368</b> |
| A critical function of USF in HGF gene regulation mediated by a multiconsensus region                                                        | <b>M. Odenthal, M.P. Spindler, K. Kerres, H.P. Dienes, and P. Schirmacher</b>                                                                | <b>374</b> |
| Endothelin-1 inhibits resistin secretion in 3T3-L1 adipocytes                                                                                | <b>Qiao Zhong, Chia-Yu Lin, Kristen J. Clarke, Robert J. Kemppainen, Dean D. Schwartz, and Robert L. Judd</b>                                | <b>383</b> |
| Nucleotide triphosphatase activity of the N-terminal nucleotide-binding domains of the multidrug resistance proteins P-glycoprotein and MRP1 | <b>Denise M. Wilkes, Changsen Wang, Patricia C. Aristimuño, Ariel F. Castro, and Guillermo A. Altenberg</b>                                  | <b>388</b> |
| Up-regulation of SREBP-1c and lipogenic genes in skeletal muscles after exercise training                                                    | <b>Shinobu Ikeda, Hiromi Miyazaki, Teruyo Nakatani, Yuko Kai, Yasutomi Kamei, Shinji Miura, Nobuyo Tsuboyama-Kasaoka, and Osamu Ezaki</b>    | <b>395</b> |
| Hepatocyte growth factor upregulates thymosin $\beta$ 4 in human umbilical vein endothelial cells                                            | <b>In Suk Oh, Sang Sup So, Kwang Yeop Jahng, and Hwan Gyu Kim</b>                                                                            | <b>401</b> |
| Identification of alternatively spliced Act1 and implications for its roles in oncogenesis                                                   | <b>Yi-Feng Xia, Yi-Dan Li, Xiaoxia Li, and Jian-Guo Geng</b>                                                                                 | <b>406</b> |
| Superoxide activates constitutive nitric oxide synthase in a brain particulate fraction                                                      | <b>Deanne B. McPherson, Ryan P. Kilker, and Timothy D. Foley</b>                                                                             | <b>413</b> |
| Detection of site-specific proteolysis in secretory pathways                                                                                 | <b>Sung Yun Kim, Daeho Park, Myungsok Oh, Saravanan Sellamuthu, and Woo Jin Park</b>                                                         | <b>419</b> |

|                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                 |            |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Ageing increases SOCS-3 expression in rat hypothalamus: effects of food restriction                                             | <b>S. Peralta, J.M. Carrascosa, N. Gallardo, M. Ros, and C. Arribas</b>                                                                                                                                                                                                                                                                                                                                         | <b>425</b> |
| A new promoter for $\alpha_{1C}$ subunit of human L-type cardiac calcium channel $Ca_v1.2$                                      | <b>Bosong Dai, Nehad Saada, Clement Echetebeu, Christine Dettbarn, and Philip Palade</b>                                                                                                                                                                                                                                                                                                                        | <b>429</b> |
| A dipalmitoyl peptide that binds SH3 domain, disturbs intracellular signal transduction, and inhibits tumor growth in vivo      | <b>Ki-Young Lee, Jeong Hyeok Yoon, Mihyung Kim, Sujin Roh, Yeon-Sook Lee, Baik-Lin Seong, and Kilhyoun Kim</b>                                                                                                                                                                                                                                                                                                  | <b>434</b> |
| High-efficiency gene electrotransfer into skeletal muscle: description and physiological applicability of a new pulse generator | <b>Anne-Cécile Durieux, Régis Bonnefoy, Chloé Manissolle, and Damien Freyssen</b>                                                                                                                                                                                                                                                                                                                               | <b>443</b> |
| Targeted disruption of one allele of the Y-box protein gene, Chk-YB-1b, in DT40 cells results in major defects in cell cycle    | <b>Shivalingappa K. Swamynathan, Balwantkumar R. Varma, Karl T. Weber, and Ramareddy V. Guntaka</b>                                                                                                                                                                                                                                                                                                             | <b>451</b> |
| Resistin and RELM- $\alpha$ gene expression in white adipose tissue of lactating mice                                           | <b>Chen Bing, Javier Gomez-Ambrosi, Natalia Zabalegui, Gareth Williams, and Paul Trayhurn</b>                                                                                                                                                                                                                                                                                                                   | <b>458</b> |
| Molecular basis of ATP-sensitive $K^+$ channels in rat vascular smooth muscles                                                  | <b>Kun Cao, Guanghua Tang, Dahai Hu, and Rui Wang</b>                                                                                                                                                                                                                                                                                                                                                           | <b>463</b> |
| Role of disulfide bond formation in the folding and assembly of the envelope glycoproteins of a pestivirus                      | <b>Norica Branza-Nichita, Catalin Lazar, David Durantel, Raymond A. Dwek, and Nicole Zitzmann</b>                                                                                                                                                                                                                                                                                                               | <b>470</b> |
| Chemokine receptor CCR5: polymorphism at protein level                                                                          | <b>Shunji Suzuki, Tomoko Miyagi, Linda F. Chuang, Peter M. Yau, Roy H. Doi, and Ronald Y. Chuang</b>                                                                                                                                                                                                                                                                                                            | <b>477</b> |
| Role of the actin cytoskeleton in store-mediated calcium entry in glioma C6 cells                                               | <b>Pawel Sabala, Berenika Targos, Antonella Caravelli, Rafał Czajkowski, Dmitri Lim, Gianni Gragnaniello, Luigia Santella, and Jolanta Barańska</b>                                                                                                                                                                                                                                                             | <b>484</b> |
| Isolation and characterization of Golgi apparatus-specific GODZ with the DHHC zinc finger domain                                | <b>Takeshi Uemura, Hisashi Mori, and Masayoshi Mishina</b>                                                                                                                                                                                                                                                                                                                                                      | <b>492</b> |
| Identification of genes regulating colorectal carcinogenesis by using the algorithm for diagnosing malignant state method       | <b>Yasushi Ichikawa, Takashi Ishikawa, Shinji Takahashi, Youhei Hamaguchi, Tomoyuki Morita, Itaru Nishizuka, Shigeki Yamaguchi, Itaru Endo, Hideyuki Ike, Shinji Togo, Shigeo Oki, Hiroshi Shimada, Koji Kadota, Shugo Nakamura, Hitoshi Goto, Hiroyuki Nitanda, Susumu Satomi, Takehito Sakai, Ichiei Narita, Fumitake Gejyo, Yasuhiro Tomaru, Kentaro Shimizu, Yoshihide Hayashizaki, and Yasushi Okazaki</b> | <b>497</b> |

**Number 3, August 23, 2002**

|                                                                                                                                                                    |                                                                                                                                                                                                    |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Human $\alpha$ -fetoprotein binds to primary macrophages                                                                                                           | <b>Aur  lie Atemezem, Elisabeth Mbemba, Ren  e Marfaing, Jenny Vaysse, Michel Pontet, Line Saffar, Nathalie Charnaux, and Liliane Gattegno</b>                                                     | <b>507</b> |
| Differential interaction of Enigma protein with the two RET isoforms                                                                                               | <b>Maria Grazia Borrello, Elena Mercalli, Carla Perego, Debora Degl'Innocenti, Simona Ghizzoni, Elena Arighi, Barbara Eroini, Maria Grazia Rizzetti, and Marco A. Pierotti</b>                     | <b>515</b> |
| An N-terminal sequence specific for a novel Homer1 isoform controls trafficking of group I metabotropic glutamate receptor in mammalian cells                      | <b>Hironori Saito, Masato Kimura, Atsushi Inanobe, Toru Ohe, and Yoshihisa Kurachi</b>                                                                                                             | <b>523</b> |
| NIRF, a novel RING finger protein, is involved in cell-cycle regulation                                                                                            | <b>Tsutomu Mori, Yuanyuan Li, Hiroaki Hata, Kazuo Ono, and Hideo Kochi</b>                                                                                                                         | <b>530</b> |
| Difference of gene expression profiles in spontaneous hypertensive rats and Wistar-Kyoto rats from two sources                                                     | <b>Tomohiko Okuda, Toshiki Sumiya, Naoharu Iwai, and Toshiyuki Miyata</b>                                                                                                                          | <b>537</b> |
| Global analysis of differentially expressed genes during progression of calcium oxalate nephrolithiasis                                                            | <b>Susumu Katsuma, Satoshi Shiojima, Akira Hirasawa, Kazuchika Takagaki, Yoshinori Kaminishi, Masahiro Koba, Yoshimi Hagidai, Masatoshi Murai, Tadaaki Ohgi, Junichi Yano, and Gozoh Tsujimoto</b> | <b>544</b> |
| Influence of amino acid numbers between two ligand cysteines of zinc finger proteins on affinity and specificity of DNA binding                                    | <b>Makoto Nagaoka, Yumi Kondo, Yumiko Uno, and Yukio Sugiura</b>                                                                                                                                   | <b>553</b> |
| Evidence for the intimate relationship between vesicle budding from the ER and the unfolded protein response                                                       | <b>Miyuki Sato, Ken Sato, and Akihiko Nakano</b>                                                                                                                                                   | <b>560</b> |
| A genetic link between the unfolded protein response and vesicle formation from the endoplasmic reticulum                                                          | <b>Hironori Higashio and Kenji Kohno</b>                                                                                                                                                           | <b>568</b> |
| Cell-cycle-dependent regulation of CNT1, a concentrative nucleoside transporter involved in the uptake of cell-cycle-dependent nucleoside-derived anticancer drugs | <b>Raquel Vald  s, F. Javier Casado, and Mar  al Pastor-Anglada</b>                                                                                                                                | <b>575</b> |
| Overexpression of choline kinase is a frequent feature in human tumor-derived cell lines and in lung, prostate, and colorectal human cancers                       | <b>Ana Ram  rez de Molina, Agust  n Rodr  guez-Gonz  lez, Ruth Guti  rrez, Luis Mart  nez-Pi  eiro, Jos   J. S  nchez, F  lix Bonilla, Rafael Rosell, and Juan Carlos Lacal</b>                    | <b>580</b> |



|                                                                                                                                                                                            |                                                                                                                                                                                                                                                                      |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Inhibition of $\beta$ -catenin/Tcf activity by white tea, green tea, and epigallocatechin-3-gallate (EGCG): minor contribution of $H_2O_2$ at physiologically relevant EGCG concentrations | <b>Wan-Mohaiza Dashwood, Gayle A. Orner, and Roderick H. Dashwood</b>                                                                                                                                                                                                | <b>584</b> |
| Differential expression of insulin genes 1 and 2 in MIN6 cells and pseudoislets                                                                                                            | <b>Helen Roderigo-Milne, Astrid C. Hauge-Evans, Shanta J. Persaud, and Peter M. Jones</b>                                                                                                                                                                            | <b>589</b> |
| Solubility of amphiphiles in membranes: influence of phase properties and amphiphile head group                                                                                            | <b>Luís M.B.B. Estronca, Maria João Moreno, Magda S.C. Abreu, Eurico Melo, and Winchil L.C. Vaz</b>                                                                                                                                                                  | <b>596</b> |
| Platelet-derived growth factor-B and -C and active $\alpha$ -receptors in medulloblastoma cells                                                                                            | <b>Johanna Andrae, Catrin Molander, Anja Smits, Keiko Funa, and Monica Nistér</b>                                                                                                                                                                                    | <b>604</b> |
| Selective oxygenation of <i>N</i> -arachidonylglycine by cyclooxygenase-2                                                                                                                  | <b>Jeffery J. Prusakiewicz, Philip J. Kingsley, Kevin R. Kozak, and Lawrence J. Marnett</b>                                                                                                                                                                          | <b>612</b> |
| Brefeldin A-induced prosomatostatin N-glycosylation in AtT20 cells                                                                                                                         | <b>Philippe Daull, Will Home, Guy Boileau, and Denis LeBel</b>                                                                                                                                                                                                       | <b>618</b> |
| Dominant expression of ATP-binding cassette transporter-1 on basolateral surface of Caco-2 cells stimulated by LXR/RXR ligands                                                             | <b>Tohru Ohama, Ken-ichi Hirano, Zhongyan Zhang, Ryo Aoki, Ken-ichi Tsujii, Yumiko Nakagawa-Toyama, Kosuke Tsukamoto, Chiaki Ikegami, Akifumi Matsuyama, Masato Ishigami, Naohiko Sakai, Hisatoyo Hiraoka, Kazumitsu Ueda, Shizuya Yamashita, and Yuji Matsuzawa</b> | <b>625</b> |
| The interaction of anthocyanins with bilitranslocase                                                                                                                                       | <b>Sabina Passamonti, Urska Vrhovsek, and Fulvio Mattivi</b>                                                                                                                                                                                                         | <b>631</b> |
| Signal transduction through the T cell receptor is dynamically regulated by balancing kinase and phosphatase activities                                                                    | <b>Andrew E. Schade and Alan D. Levine</b>                                                                                                                                                                                                                           | <b>637</b> |
| Functional characterization of mouse cation transporter mOCT2 compared with mOCT1                                                                                                          | <b>Mari Kakehi, Noriko Koyabu, Takanori Nakamura, Takeshi Uchiumi, Michihiko Kuwano, Hisakazu Ohtani, and Yasufumi Sawada</b>                                                                                                                                        | <b>644</b> |
| 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin is a possible activator of human cytomegalovirus replication in a human fibroblast cell line                                                  | <b>Tsugiya Murayama, Masao Inoue, Taisei Nomura, Seiichiro Mori, and Yoshito Eizuru</b>                                                                                                                                                                              | <b>651</b> |
| The association of 14-3-3 $\gamma$ and actin plays a role in cell division and apoptosis in astrocytes                                                                                     | <b>Xiao Qian Chen and Albert Cheung Hoi Yu</b>                                                                                                                                                                                                                       | <b>657</b> |
| The SH3 domain of Src can downregulate its kinase activity in the absence of the SH2 domain-pY527 interaction                                                                              | <b>Jan Brábek, Dominik Mojžita, Marian Novotný, František Půta, and Petr Folk</b>                                                                                                                                                                                    | <b>664</b> |
| Tumor necrosis factor-related apoptosis-inducing ligand induces apoptosis in human articular chondrocytes in vitro                                                                         | <b>I. Pettersen, Y. Figenschau, E. Olsen, W. Bakkellund, B. Smedsröd, and B. Sveinbjörnsson</b>                                                                                                                                                                      | <b>671</b> |

|                                                                                                                                                                             |                                                                                                                                                              |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Identification of a novel cytochrome P450, CYP4X1, with unique localization specific to the brain                                                                           | <b>Johan Bylund, Chenyang Zhang, and David R. Harder</b>                                                                                                     | <b>677</b> |
| Hearing loss: frequency and functional studies of the most common connexin26 alleles                                                                                        | <b>Paola D'Andrea, Valentina Veronesi, Massimiliano Bicego, Salvatore Melchionda, Leopoldo Zelante, Enzo Di Iorio, Roberto Bruzzone, and Paolo Gasparini</b> | <b>685</b> |
| Some protein tyrosine phosphatases target in part to lipid rafts and interact with caveolin-1                                                                               | <b>A. Caselli, B. Mazzinghi, G. Camici, G. Manao, and G. Ramponi</b>                                                                                         | <b>692</b> |
| Melanin-concentrating hormone and its receptor are expressed and functional in human skin                                                                                   | <b>Martin J. Hoogduijn, Janis Ancans, Itaru Suzuki, Siân Estdale, and Anthony J. Thody</b>                                                                   | <b>698</b> |
| A pro-apoptotic effect of the CDK inhibitor p57 <sup>Kip2</sup> on staurosporine-induced apoptosis in HeLa cells                                                            | <b>Magnus K.R. Samuelsson, Ahmad Pazirandeh, and Sam Okret</b>                                                                                               | <b>702</b> |
| Hyperbaric oxygen selectively induces angiopoietin-2 in human umbilical vein endothelial cells                                                                              | <b>Shankung Lin, Kou-Gi Shyu, Chun-Chung Lee, Bao-Wei Wang, Chih-Chuan Chang, Ya-Chen Liu, Fan-Yen Huang, and Hang Chang</b>                                 | <b>710</b> |
| DOCK2 mediates T cell receptor-induced activation of Rac2 and IL-2 transcription                                                                                            | <b>Hiroshi Nishihara, Masae Maeda, Masumi Tsuda, Yoshinori Makino, Hirofumi Sawa, Kazuo Nagashima, and Shinya Tanaka</b>                                     | <b>716</b> |
| Expression of a connexin31 mutation causing erythrokeratoderma variabilis is lethal for HeLa cells                                                                          | <b>Simone Diestel, Gabriele Richard, Britta Döring, and Otto Traub</b>                                                                                       | <b>721</b> |
| Model mice for tissue-specific deletion of the manganese superoxide dismutase (MnSOD) gene                                                                                  | <b>Takashi Ikegami, Yo-ichi Suzuki, Takahiko Shimizu, Kyo-ichi Isono, Haruhiko Koseki, and Takuji Shirasawa</b>                                              | <b>729</b> |
| SoxV, an orthologue of the CcdA disulfide transporter, is involved in thiosulfate oxidation in <i>Rhodovulum sulfidophilum</i> and reduces the periplasmic thioredoxin SoxW | <b>Corinne Appia-Ayme and Ben C. Berks</b>                                                                                                                   | <b>737</b> |
| Heat shock response inhibits IL-18 expression through the JNK pathway in murine peritoneal macrophages                                                                      | <b>Yun Wang, Changlin Li, Xingyu Wang, Jinsong Zhang, and Zongliang Chang</b>                                                                                | <b>742</b> |
| Specificity of elongation factor EF-TU for hydrophobic peptides                                                                                                             | <b>Abdelharim Malki, Teresa Caldas, Andrea Parmeggiani, Masamichi Kohiyama, and Gilbert Richarme</b>                                                         | <b>749</b> |
| Aquaporin-2 transcript is differentially regulated by dietary salt in Sprague-Dawley and Dahl SS/Jr rats                                                                    | <b>Bryan Roxas, Mariam Farjah, and Robert S. Danziger</b>                                                                                                    | <b>755</b> |
| Promotion of neutrophil adherence to human osteoblasts by microcrystals and f-Met-Leu-Phe                                                                                   | <b>Line Bouchard, Paul H. Naccache, and Patrice E. Poubelle</b>                                                                                              | <b>759</b> |

|                                                                                                                                                   |                                                                                                      |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------|
| Rolling properties of rGPIb $\alpha$ -conjugated phospholipid vesicles with different membrane flexibilities on vWf surface under flow conditions | <b>Shinji Takeoka, Yuji Teramura, Yosuke Okamura, Eishun Tsuchida, Makoto Handa, and Yasuo Ikeda</b> | <b>765</b> |
| Micromechanical coupling between cell surface receptors and RGD peptides                                                                          | <b>Amit Rahman, Yiider Tseng, and Denis Wirtz</b>                                                    | <b>771</b> |

**Number 4, August 30, 2002**

|                                                                                                                                                        |                                                                                                                                                          |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Diaphorase catalyzed biotransformation of RDX via N-denitration mechanism                                                                              | <b>Bharat Bhushan, Annamaria Halasz, Jim C. Spain, and Jalal Hawari</b>                                                                                  | <b>779</b> |
| Identification of the functional elements in the bidirectional promoter of the mouse <i>O</i> -sialoglycoprotein endopeptidase and APEX nuclease genes | <b>Shogo Ikeda, Hiroaki Ayabe, Kazuhisa Mori, Yuichi Seki, and Shuji Seki</b>                                                                            | <b>785</b> |
| Recombinant adenovirus-mediated p14 <sup>ARF</sup> overexpression sensitizes human breast cancer cells to cisplatin                                    | <b>Xiyun Deng, Min Kim, Didier Vandier, Yun-jin Jung, Toshiki Rikiyama, Magda K. Sgagias, Merrill Goldsmith, and Kenneth H. Cowan</b>                    | <b>792</b> |
| Specificity of nuclear protein binding to a CYP1A1 negative regulatory element                                                                         | <b>Scott R. Nagy and Michael S. Denison</b>                                                                                                              | <b>799</b> |
| Synergistic perturbation of phosphatidyl-choline/sphingomyelin bilayers by diacylglycerol and cholesterol                                              | <b>Don L. Armstrong, Dan B. Borchardt, and Raphael Zidovetzki</b>                                                                                        | <b>806</b> |
| Identification of ubiquitin-like protein-binding subunits of the 26S proteasome                                                                        | <b>Yasushi Saeki, Takayuki Sone, Akio Toh-e, and Hideyoshi Yokosawa</b>                                                                                  | <b>813</b> |
| Polymorphisms of the CYP1B1 gene have higher risk for prostate cancer                                                                                  | <b>Yuichiro Tanaka, Masahiro Sasaki, Masanori Kaneuchi, Hiroaki Shiina, Mikio Igawa, and Rajvir Dahiya</b>                                               | <b>820</b> |
| Functional analysis of calcium-binding EF-hand motifs of visinin-like protein-1                                                                        | <b>Lin Lin, Karl-Heinz Braunewell, Eckart D. Gundelfinger, and Rene Anand</b>                                                                            | <b>827</b> |
| Egg fucose sulfate polymer, sialoglycan, and speract all trigger the sea urchin sperm acrosome reaction                                                | <b>Noritaka Hirohashi and Victor D. Vacquier</b>                                                                                                         | <b>833</b> |
| A plant histaminase modulates cardiac anaphylactic response in guinea pig                                                                              | <b>Emanuela Masini, Alfredo Vannacci, Cosimo Marzocca, Pier Francesco Mannaioni, Olivia Befani, Rodolfo Federico, Alessandro Toma, and Bruno Mondovì</b> | <b>840</b> |
| Redox regulation of pro-inflammatory cytokines and I $\kappa$ B- $\alpha$ /NF- $\kappa$ B nuclear translocation and activation                         | <b>John J. Haddad</b>                                                                                                                                    | <b>847</b> |



|                                                                                                                                                               |                                                                                                                                                |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| A novel cell-based scintillation proximity assay for studying protein function and activity in vitro using membrane-soluble scintillants                      | <b>Steven J. Culliford, Patrick McCauley, Andrew J. Sutherland, Mark McCairn, John Sutherland, Jonathan Blackburn, and Roland Z. Kozlowski</b> | <b>857</b> |
| Induced expression of MMP-9 in C6 glioma cells is inhibited by PDGF via a PI 3-kinase-dependent pathway                                                       | <b>Pierre-Olivier Estève, Olivier Robledo, Edouard F. Potworowski, and Yves St-Pierre</b>                                                      | <b>864</b> |
| Interaction of the developmental regulator SALL1 with UBE2I and SUMO-1                                                                                        | <b>Christian Netzer, Stefan K. Bohlander, Leonie Rieger, Stefan Müller, and Jürgen Kohlhase</b>                                                | <b>870</b> |
| Pigment epithelium-derived factor protects cultured retinal pericytes from advanced glycation end product-induced injury through its antioxidative properties | <b>Sho-ichi Yamagishi, Yosuke Inagaki, Shinjiro Amano, Tamami Okamoto, Masayoshi Takeuchi, and Zenji Makita</b>                                | <b>877</b> |
| Loss of oxidized and chlorinated bases in DNA treated with reactive oxygen species: implications for assessment of oxidative damage in vivo                   | <b>Matthew Whiteman, Huang Shan Hong, Andrew Jenner, and Barry Halliwell</b>                                                                   | <b>883</b> |
| Hypoxia activates $\beta_1$ -integrin via ERK 1/2 and p38 MAP kinase in human vascular smooth muscle cells                                                    | <b>Florian Blaschke, Philipp Stawowy, Stephan Goetze, Oliver Hintz, Michael Gräfe, Ulrich Kintscher, Eckart Fleck, and Kristof Graf</b>        | <b>890</b> |
| Insertion of an exogenous domain in the adenovirus type 2 fiber globular region                                                                               | <b>L.F. Zerbini, T.A. Libermann, and A.M. Ventura</b>                                                                                          | <b>897</b> |
| Direct binding of plectin to Fer kinase and negative regulation of its catalytic activity                                                                     | <b>Pim C. Lunter and Gerhard Wiche</b>                                                                                                         | <b>904</b> |
| Processing of native caspase-14 occurs at an atypical cleavage site in normal epidermal differentiation                                                       | <b>Andy J. Chien, Richard B. Presland, and Melanie K. Kuechle</b>                                                                              | <b>911</b> |
| Identification of a candidate membrane protein for the basolateral peptide transporter of rat small intestine                                                 | <b>E.J. Shepherd, N. Lister, J.A. Affleck, J.R. Bronk, G.L. Kellett, I.D. Collier, P.D. Bailey, and C.A.R. Boyd</b>                            | <b>918</b> |
| Intracellular zinc distribution and transport in C6 rat glioma cells                                                                                          | <b>Hajo Haase and Detmar Beyersmann</b>                                                                                                        | <b>923</b> |
| IL-2 receptor signaling through the Shb adapter protein in T and NK cells                                                                                     | <b>Cecilia K. Lindholm</b>                                                                                                                     | <b>929</b> |
| Preconditioning decreases ischemia/reperfusion-induced release and activation of matrix metalloproteinase-2                                                   | <b>Manoj M. Lalu, Csaba Csonka, Zoltán Giricz, Tamás Csont, Richard Schulz, and Péter Ferdinandy</b>                                           | <b>937</b> |
| The mechanisms of lipoxygenase inhibitor-induced apoptosis in human breast cancer cells                                                                       | <b>Wei-Gang Tong, Xian-Zhong Ding, and Thomas E. Adrian</b>                                                                                    | <b>942</b> |
| Supercomplex formation between Mlh1–Mlh3 and Sgs1–Top3 heterocomplexes in meiotic yeast cells                                                                 | <b>Ting-Fang Wang and Wen-Mei Kung</b>                                                                                                         | <b>949</b> |

|                                                                                                                                                                                      |                                                                                                                |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------|
| RNA polymerase II large subunit is cleaved by caspases during DNA damage-induced apoptosis                                                                                           | <b>Yi Lu, Zhonghui Luo, and David B. Bregman</b>                                                               | <b>954</b>  |
| Interaction of oncogenic papillomavirus E6 proteins with fibulin-1                                                                                                                   | <b>Minjie Du, Xueli Fan, Eva Hong, and Jason J. Chen</b>                                                       | <b>962</b>  |
| Human brain nucleoside diphosphate kinase activity is decreased in Alzheimer's disease and Down syndrome                                                                             | <b>Seong Hwan Kim, Michael Fountoulakis, Nigel J. Cairns, and Gert Lubec</b>                                   | <b>970</b>  |
| Effects of nitric oxide donors on vascular endothelial growth factor gene induction                                                                                                  | <b>Hideo Kimura, Tsutomu Ogura, Yukiko Kurashima, Alessandro Weisz, and Hiroyasu Esumi</b>                     | <b>976</b>  |
| RecA-promoted sliding of base pairs within DNA repeats: quantitative analysis by a slippage assay                                                                                    | <b>Vasundhara M. Navadgi, Subhojit Sen, and Basuthkar J. Rao</b>                                               | <b>983</b>  |
| A designed apoplastocyanin variant that shows reversible folding                                                                                                                     | <b>Deepshikha Datta and Stephen L. Mayo</b>                                                                    | <b>988</b>  |
| Physical association of the APIS complex and general transcription factors                                                                                                           | <b>Liping Sun, Stephen Albert Johnston, and Thomas Kodadek</b>                                                 | <b>991</b>  |
| Comparison of antisense oligonucleotides and siRNAs in cell culture and in vivo                                                                                                      | <b>Jean-Rémi Bertrand, Mireille Pottier, Antoine Vekris, Paule Opolon, Andrei Maksimenko, and Claude Malvy</b> | <b>1000</b> |
| Trichostatin A, a histone deacetylase inhibitor, activates the IGFBP-3 promoter by upregulating Sp1 activity in hepatoma cells: alteration of the Sp1/Sp3/HDAC1 multiprotein complex | <b>Hong Seok Choi, Je Ho Lee, Jong Gu Park, and Young Ik Lee</b>                                               | <b>1005</b> |
| CREB DNA binding activation by a 50-Hz magnetic field in HL60 cells is dependent on extra- and intracellular $\text{Ca}^{2+}$ but not PKA, PKC, ERK, or p38 MAPK                     | <b>Jiliang Zhou, Gengdong Yao, Jingsong Zhang, and Zongliang Chang</b>                                         | <b>1013</b> |
| Pax-2 interacts with RB and reverses its repression on the promoter of <i>Rig-1</i> , a <i>Robo</i> member                                                                           | <b>Shyng-Shiou F. Yuan, Yao-Tsung Yeh, and Eva Y.-H.P. Lee</b>                                                 | <b>1019</b> |
| Glucocorticoid induced expression of glutamine synthetase in hepatoma cells                                                                                                          | <b>Frank Gaunitz, Kerstin Heise, Robert Schumann, and Rolf Gebhardt</b>                                        | <b>1026</b> |

## ERRATA

|                                                                                                                                                                                                                                                                                                        |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Volume <b>276</b> , Number 2 (2000), in the article "Normal Corpus Callosum in Emx1 Mutant Mice with C57BL/6 Background" by Huailian Guo, Jennifer M. Christoff, Victor E. Campos, and Yuqing Li, pages 649–653 (doi:10.1006/bbrc.2000.3533)                                                           | <b>1033</b> |
| Volume <b>295</b> , Number 1 (2002), in the article "Transcription of <i>Xanthomonas campestris prt1</i> gene encoding protease 1 increases during stationary phase and requires global transcription factor Clp" by Yi-Min Hsiao and Yi-Hsiung Tseng, pages 43–49 (doi:10.1016/S0006-291X(02)00630-7) | <b>1034</b> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Volume <b>295</b> , Number 2 (2002), in the article "Quantitative monitoring of the mRNA expression pattern of the TGF- $\beta$ -isoforms ( $\beta 1$ , $\beta 2$ , $\beta 3$ ) during transdifferentiation of hepatic stellate cells using a newly developed real-time SYBR Green PCR" by L. Wickert, S. Steinkrüger, M. Abiaka, U. Bolkenius, O. Purps, C. Schnabel, and A.M. Gressner, pages 330–335<br>(doi:10.1016/S0006-291X(02)00669-1) | <b>1035</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|

**Number 5, September 6, 2002**

**EDITORIAL**

|                                                                                     |                                        |
|-------------------------------------------------------------------------------------|----------------------------------------|
| Serendipitous discoveries from sudden inspirations and the joy of being a scientist | <b>Takashi Sugimura</b><br><b>1037</b> |
|-------------------------------------------------------------------------------------|----------------------------------------|

**BREAKTHROUGHS AND VIEWS**

|                                                                                |                                       |
|--------------------------------------------------------------------------------|---------------------------------------|
| Regeneration therapy of pancreatic $\beta$ cells: towards a cure for diabetes? | <b>Takashi Yamaoka</b><br><b>1039</b> |
|--------------------------------------------------------------------------------|---------------------------------------|

**REGULAR ARTICLES**

|                                                                                                                                                     |                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conformation-dependent antibiotic activity of tritrypticin, a cathelicidin-derived antimicrobial peptide                                            | <b>Sung-Tae Yang, Song Yub Shin,<br/>Yong-Chul Kim, Yangmee Kim,<br/>Kyung-Soo Hahm, and Jae Il Kim</b><br><b>1044</b>                                                                          |
| Testosterone up-regulates scavenger receptor BI and stimulates cholesterol efflux from macrophages                                                  | <b>Claus Langer, Barbara Gansz,<br/>Christian Goepfert, Thomas Engel,<br/>Yoshinari Uehara, Gerlinde von Dehn,<br/>Hans Jansen, Gerd Assmann,<br/>and Arnold von Eckardstein</b><br><b>1051</b> |
| Gln277 and Phe554 residues are involved in thermal inactivation of protective antigen of <i>Bacillus anthracis</i>                                  | <b>Samer Singh, Nidhi Ahuja,<br/>Vibha Chauhan, E. Rajasekaran,<br/>Syed Mohsin Waheed, Rajiv Bhat,<br/>and Rakesh Bhatnagar</b><br><b>1058</b>                                                 |
| Salinity- and ABA-induced up-regulation and light-mediated modulation of mRNA encoding glycine-rich RNA-binding protein from <i>Sorghum bicolor</i> | <b>Aneeta, Neeti Sanan-Mishra,<br/>Narendra Tuteja,<br/>and Sudhir Kumar Sopory</b><br><b>1063</b>                                                                                              |
| Novel optical solid-state glucose sensor using immobilized glucose oxidase                                                                          | <b>Brandy J. White and H. James Harmon</b><br><b>1069</b>                                                                                                                                       |
| Generation of thermostable monomeric luciferases from <i>Photobacterium luminescens</i>                                                             | <b>Annette Westerlund-Karlsson,<br/>Petri Saviranta, and Matti Karp</b><br><b>1072</b>                                                                                                          |
| Differential effect of heme oxygenase-1 in endothelial and smooth muscle cell cycle progression                                                     | <b>Giovanni Li Volti, Jishi Wang,<br/>Frank Traganos, Attallah Kappas,<br/>and Nader G. Abraham</b><br><b>1077</b>                                                                              |



|                                                                                                                                                                                     |                                                                                                                                                                                                           |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Identification of nuclear type II [ <sup>3</sup> H]estradiol binding sites as histone H4                                                                                            | Kevin Shoulars, Trellis Brown,<br>Mary Ann Alejandro, Jan Crowley,<br>and Barry M. Markaverich                                                                                                            | 1083 |
| Casein kinase II stimulates rat liver mitochondrial glycerophosphate acyltransferase activity                                                                                       | Thomas M. Onorato and Dipak Haldar                                                                                                                                                                        | 1091 |
| TBP-interacting protein 120B, which is induced in relation to myogenesis, binds to NOT3                                                                                             | Tsutomu Aoki, Nami Okada,<br>Toshifumi Wakamatsu,<br>and Taka-aki Tamura                                                                                                                                  | 1097 |
| VCY2 protein interacts with the HECT domain of ubiquitin-protein ligase E3A                                                                                                         | Elaine Y.M. Wong, Jenny Y.M. Tse,<br>Kwok-Ming Yao, Po-Chor Tam,<br>and William S.B. Yeung                                                                                                                | 1104 |
| Isolation and identification of the AKH III precursor-related peptide from <i>Locusta migratoria</i>                                                                                | Jurgen Huybrechts, Elke Clynen,<br>Geert Baggerman, Arnold De Loof,<br>and Liliane Schoofs                                                                                                                | 1112 |
| Phylogeny of New World arenaviruses based on the complete coding sequences of the small genomic segment identified an evolutionary lineage produced by intrasegmental recombination | Rémi N. Charrel, Heinz Feldmann,<br>Charles F. Fulhorst, Riad Khelifa,<br>Reine de Chesse,<br>and Xavier de Lamballerie                                                                                   | 1118 |
| Differential gene expression in retinoic acid-induced differentiation of acute promyelocytic leukemia cells, NB4 and HL-60 cells                                                    | Ki-Hwan Lee, Mi-Yoon Chang,<br>Joon-Ik Ahn, Dong-Hyun Yu,<br>Sung-Soo Jung, Jung-Hye Choi,<br>Yun-Hee Noh, Yong-Sung Lee,<br>and Myung-Ju Ahn                                                             | 1125 |
| Construction of a zebrafish cDNA microarray: gene expression profiling of the zebrafish during development                                                                          | Christopher Ton, Dimitri Stamatiou,<br>and Choong-Chin Liew                                                                                                                                               | 1134 |
| Genetic and physical maps of <i>jerker</i> ( <i>Esprn<sup>je</sup></i> ) on mouse chromosome 4                                                                                      | Torrance Jackson, James Thomas,<br>Eric D. Green, and Konrad Noben-Trauth                                                                                                                                 | 1143 |
| The antioxidant cocktail effective microorganism X (EM-X) inhibits oxidant-induced interleukin-8 release and the peroxidation of phospholipids in vitro                             | Monica Deiana, M. Assunta Dessi, Bin Ke,<br>Yun-Fei Liang, Teruo Higa,<br>Peter S. Gilmour, Ling-Sun Jen,<br>Irfan Rahman, and Okezie I. Aruoma                                                           | 1148 |
| GSH-dependent peroxidase activity of the rice ( <i>Oryza sativa</i> ) glutaredoxin, a thioltransferase                                                                              | Kyun Oh Lee, Jung Ro Lee,<br>Ji Young Yoo, Ho Hee Jang,<br>Jeong Chan Moon,<br>Bae Gyo Jung, Yong Hun Chi,<br>Soo Kwon Park, Seung Sik Lee,<br>Chae Oh Lim, Dae-Jin Yun,<br>Moo Je Cho, and Sang Yeol Lee | 1152 |
| Expression of hepatitis B virus X (HBx) gene is up-regulated by adriamycin at the post-transcriptional level                                                                        | Chawon Yun, Jae-Ho Lee,<br>Jin-Hee Wang, Je Kyung Seong,<br>Seung Hyun Oh, Dae-Yeul Yu,<br>and Hyeseong Cho                                                                                               | 1157 |

|                                                                                                                                                   |                                                                                                                                                                                                                                                                       |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Mammalian Apg12p, but not the Apg12p-Apg5p conjugate, facilitates LC3 processing                                                                  | Isei Tanida, Tomohito Nishitani, Takahiro Nemoto, Takashi Ueno, and Eiki Kominami                                                                                                                                                                                     | 1164 |
| Nitration of PECAM-1 ITIM tyrosines abrogates phosphorylation and SHP-2 binding                                                                   | Debra K. Newman, Sara Hoffman, Srigiridhar Kotamraju, Tieming Zhao, Bassam Wakim, Balaraman Kalyanaraman, and Peter J. Newman                                                                                                                                         | 1171 |
| Uptake and intracellular fate of gelonin, a ribosome-inactivating protein, in rat liver                                                           | Melwin Colaço, M.M. Bapat, Sandra Misquith, Michel Jadot, Simone Wattiaux-De Coninck, and Robert Wattiaux                                                                                                                                                             | 1180 |
| Fertilization in <i>Sepia officinalis</i> : the first mollusk sperm-attracting peptide                                                            | Céline Zatylny, Laure Marvin, Jean Gagnon, and Joël Henry                                                                                                                                                                                                             | 1186 |
| A sugarcane cystatin: recombinant expression, purification, and antifungal activity                                                               | A. Soares-Costa, L.M. Beltramini, O.H. Thiemann, and F. Henrique-Silva                                                                                                                                                                                                | 1194 |
| Single nucleotide polymorphisms of estrogen receptor $\alpha$ in human renal cell carcinoma                                                       | Yuichiro Tanaka, Masahiro Sasaki, Masanori Kaneuchi, Seiichiro Fujimoto, and Rajvir Dahiya                                                                                                                                                                            | 1200 |
| Binding patterns of vanadium ions with different valence states to human serum transferrin studied by HPLC/high-resolution ICP-MS                 | Megumi Hamano Nagaoka, Takeshi Yamazaki, and Tamio Maitani                                                                                                                                                                                                            | 1207 |
| Molecular cloning of a novel immunoglobulin superfamily gene preferentially expressed by brain and testis                                         | Shinya Suzu, Yokichi Hayashi, Tatsuo Harumi, Kouji Nomaguchi, Muneo Yamada, Hirotoishi Hayasawa, and Kazuo Motoyoshi                                                                                                                                                  | 1215 |
| A ubiquitin-interacting motif from Hrs binds to and occludes the ubiquitin surface necessary for polyubiquitination in monoubiquitinated proteins | Alexander Shekhtman and David Cowburn                                                                                                                                                                                                                                 | 1222 |
| Identification of HIV-1 nucleocapsid protein: nucleic acid antagonists with cellular anti-HIV activity                                            | Andrew G. Stephen, Karen M. Worthy, Eric Towler, Judy A. Mikovits, Shizuko Sei, Paula Roberts, Quan-en Yang, Rhone K. Akee, Paul Klausmeyer, Thomas G. McCloud, Lou Henderson, Alan Rein, David G. Covell, Michael Currens, Robert H. Shoemaker, and Robert J. Fisher | 1228 |
| Hemolytic activity and developmental expression of pore-forming peptide, clonorin                                                                 | Ji-Yun Lee, Pyo-Yun Cho, Tae Yun Kim, Shin-Yong Kang, Kye-Yong Song, and Sung-Jong Hong                                                                                                                                                                               | 1238 |
| A $\beta$ -tubulin-like cDNA expressed specifically in elongating cotton fibers induces longitudinal growth of fission yeast                      | Shengjian Ji, Yingchun Lu, Jun Li, Gang Wei, Xiujuan Liang, and Yuxian Zhu                                                                                                                                                                                            | 1245 |

|                                                                                                                                                                                                                         |                                                                                                                                                                                                           |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| The conformational alteration of the mutated extracellular domain of Fas in an adult T cell leukemia cell line                                                                                                          | <b>Takahiro Maeda, Susumu Nakayama, Yasuaki Yamada, Kazuyuki Sugahara, Hajime Isomoto, Masayuki Tawara, Reishi Yamasaki, Yasuyuki Onimaru, Tetsuro Matsushita, Yoshiyuki Ohzono, and Shimeru Kamihira</b> | <b>1251</b> |
| Proteasome inhibitors regulate tyrosine phosphorylation of IRS-1 and insulin signaling in adipocytes                                                                                                                    | <b>Cristina M. Rondinone and Deborah Kramer</b>                                                                                                                                                           | <b>1257</b> |
| IL-6 activates HSP72 gene expression in human skeletal muscle                                                                                                                                                           | <b>Mark A. Febbraio, Adam Steensberg, Christian P. Fischer, Charlotte Keller, Natalie Hiscock, and Bente Klarlund Pedersen</b>                                                                            | <b>1264</b> |
| ADP-ribose stimulates the calcium release channel RyR1 in skeletal muscle of rat                                                                                                                                        | <b>B. Bastide, K. Snoeckx, and Y. Mounier</b>                                                                                                                                                             | <b>1267</b> |
| Cytochrome <i>bo</i> <sub>3</sub> from <i>Escherichia coli</i> : the binding and turnover of nitric oxide                                                                                                               | <b>Clive S. Butler, Elena Forte, Francesca Maria Scandurra, Marzia Arese, Alessandro Giuffré, Colin Greenwood, and Paolo Sarti</b>                                                                        | <b>1272</b> |
| TEF-1 transcription factors regulate activity of the mouse mammary tumor virus LTR                                                                                                                                      | <b>Tomoji Maeda, Mamiko Maeda, and Alexandre F.R. Stewart</b>                                                                                                                                             | <b>1279</b> |
| Quantitative analysis for human glucocorticoid receptor $\alpha/\beta$ mRNA in IBD                                                                                                                                      | <b>Fumika Orii, Toshifumi Ashida, Masafumi Nomura, Atsuo Maemoto, Takanori Fujiki, Tokiyoshi Ayabe, Shinjiro Imai, Yusuke Saitoh, and Yutaka Kohgo</b>                                                    | <b>1286</b> |
| Inhibition of NF- $\kappa$ B activation by merlin                                                                                                                                                                       | <b>Jae Young Kim, Hongtae Kim, Sin-Soo Jeun, Suk Joo Rha, Young Hoon Kim, Young Jin Ko, Jonghwa Won, Kweon-Haeng Lee, Hyoungh Kyun Rha, and Young-Pil Wang</b>                                            | <b>1295</b> |
| Improvement of human interferon $\text{H}_\text{U}$ IFN $\alpha$ 2 and HCV core protein expression levels in <i>Escherichia coli</i> but not of $\text{H}_\text{U}$ IFN $\alpha$ 8 by using the tRNA <sub>AGA/AGG</sub> | <b>Nelson Acosta-Rivero, Julio C. Sánchez, and Juan Morales</b>                                                                                                                                           | <b>1303</b> |
| Inhibition of yeast ribosomal stalk phosphorylation by Cu-Zn superoxide dismutase                                                                                                                                       | <b>Rafał Zieliński, Marek Pilecki, Konrad Kubiński, Piotr Zień, Ulf Hellman, and Ryszard Szyszka</b>                                                                                                      | <b>1310</b> |
| A $\beta$ (25–35) and A $\beta$ (1–40) act on different calcium channels in CA1 hippocampal neurons                                                                                                                     | <b>Catherine Rovira, Nicolas Arbez, and Jean Mariani</b>                                                                                                                                                  | <b>1317</b> |
| Expression of a p67 <sup>phox</sup> homolog in Caco-2 cells giving O <sub>2</sub> <sup>-</sup> -reconstituting ability to cytochrome <i>b</i> <sub>558</sub> together with recombinant p47 <sup>phox</sup>              | <b>L.S. Yoshida, S. Nishida, T. Shimoyama, T. Kawahara, K. Rokutan, and S. Tsunawaki</b>                                                                                                                  | <b>1322</b> |
| A novel, anchorless streptococcal surface protein that binds to human immunoglobulins                                                                                                                                   | <b>Shigetada Kawabata, Yasuharu Tamura, Jumpei Murakami, Yutaka Terao, Ichiro Nakagawa, and Shigeyuki Hamada</b>                                                                                          | <b>1329</b> |



|                                                                                                                                                                            |                                                                                                             |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------|
| Mayaro virus infection cycle relies on casein kinase 2 activity                                                                                                            | <b>Madalena M.S. Barroso, Carla S. Lima, Mário A.C. Silva-Neto, and Andrea T. Da Poian</b>                  | <b>1334</b> |
| p130/p107 expression distinguishes adipogenic potential in primary myoblasts based on age                                                                                  | <b>Yu Guan, Jane M. Taylor-Jones, Charlotte A. Peterson, and Robert E. McGehee Jr.</b>                      | <b>1340</b> |
| Homology modeling of the cellulose-binding domain of a pollen allergen from rye grass: structural basis for the cellulose recognition and associated allergenic properties | <b>Annick Barre and Pierre Rougé</b>                                                                        | <b>1346</b> |
| Preparation and analysis of small unilamellar phospholipid vesicles of a uniform size                                                                                      | <b>Wayne H. Pitcher III and Wray H. Huestis</b>                                                             | <b>1352</b> |
| Smad pathway is activated in the diabetic mouse kidney and Smad3 mediates TGF- $\beta$ -induced fibronectin in mesangial cells                                             | <b>Motohide Isono, Sheldon Chen, Soon Won Hong, M. Carmen Iglesias-de la Cruz, and Fuad N. Ziyadeh</b>      | <b>1356</b> |
| Acidophilic character of yeast PID261/BUD32, a putative ancestor of eukaryotic protein kinases                                                                             | <b>Sonia Facchin, Stefania Sarno, Oriano Marin, Raffaele Lopreiato, Geppo Sartori, and Lorenzo A. Pinna</b> | <b>1366</b> |
| Successful inactivation of endogenous <i>Oct-3/4</i> and <i>c-mos</i> genes in mouse preimplantation embryos and oocytes using short interfering RNAs                      | <b>Mi-Hyun Kim, Xunmei Yuan, Sayaka Okumura, and Fuyuki Ishikawa</b>                                        | <b>1372</b> |
| Author Index for Volume 296                                                                                                                                                |                                                                                                             | <b>1378</b> |

Volume 297, Number 1, September 13, 2002

**BREAKTHROUGHS AND VIEWS**

- Gene targeting by homologous recombination:  
a powerful addition to the genetic arsenal for  
*Drosophila* geneticists **Yikang S. Rong** 1

**INTERVIEW**

- A conversation with Thomas D. Pollard **K. Noelle Gracy** 6

**REGULAR ARTICLES**

- Functional properties of Kch, a prokaryotic  
homologue of eukaryotic potassium channels **Tim S. Munsey, Atul Mohindra,  
Shahnaz P. Yusaf, Alison Grainge,  
Myeong-H. Wang, Dennis Wray,  
and Asipu Sivaprasadarao** 10
- A new ERK2 binding protein, Naf1, attenuates  
the EGF/ERK2 nuclear signaling **Shengliang Zhang, Masaya Fukushima,  
Shinichi Hashimoto, Chongfeng Gao,  
Lin Huang, Yayoi Fukuyo,  
Takuma Nakajima, Teruo Amagasa,  
Shoji Enomoto, Katsuro Koike,  
Osamu Miura, Naoki Yamamoto,  
and Nobuo Tsuchida** 17
- The identification of thymidylate synthase  
peptide domains located in the interface region  
that bind thymidylate synthase mRNA **Donna M. Voeller, Maria Zajac-Kaye,  
Robert J. Fisher, and Carmen J. Allegra** 24
- Interaction of plexin-B1 with PDZ  
domain-containing Rho guanine nucleotide  
exchange factors **Mutsumi Hirotani, Yoshiharu Ohoka,  
Takahiro Yamamoto, Hiromi Nirasawa,  
Tatsuo Furuyama, Mikihiro Kogo,  
Tokuzo Matsuya, and Shinobu Inagaki** 32
- Inhibition of MEPE cleavage by *Phex* **Rong Guo, Peter S.N. Rowe, Shiguang Liu,  
Leigh G. Simpson, Zhou-Sheng Xiao,  
and L. Darryl Quarles** 38
- Fluid flow induces COX-2 expression in  
MC3T3-E1 osteoblasts via a PKA signaling  
pathway **Sunil Wadhwa, Shilpa Choudhary,  
Maria Voznesensky, Mary Epstein,  
Lawrence Raisz, and Carol Pilbeam** 46
- Identification and characterization of murine  
IRAK-2 **Olaf Rosati and Michael U. Martin** 52
- Expression of survivin during liver  
regeneration **Masatoshi Deguchi, Katsuya Shiraki,  
Hidekazu Inoue, Hiroshi Okano,  
Takeshi Ito, Takenari Yamanaka,  
Kazushi Sugimoto, Takahisa Sakai,  
Shigeru Ohmori, Kazumoto Murata,  
Akihiro Furusaka, Hisashi Hisatomi,  
and Takeshi Nakano** 59

|                                                                                                                                                                                 |                                                                                                                                                |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Expression of P450 enzymes in rat whole skin and cultured epidermal keratinocytes                                                                                               | Zheyang Zhu, Sharon A. Hotchkiss, Alan R. Boobis, and Robert J. Edwards                                                                        | 65  |
| Aminoglycoside antibiotics induce pH-sensitive activation of the calcium-sensing receptor                                                                                       | Stuart J. McLarnon, Darren Holden, Donald T. Ward, Malcolm N. Jones, Austin C. Elliott, and Daniela Riccardi                                   | 71  |
| DUG is a novel homologue of translation initiation factor 4G that binds eIF4A                                                                                                   | Alexandra Göke, Rüdiger Göke, Anja Knolle, Heidi Trusheim, Harald Schmidt, Andreas Wilmen, Ruaidhri Carmody, Burkhard Göke, and Youhai H. Chen | 78  |
| Potent CpG oligonucleotides containing phosphodiester linkages: in vitro and in vivo immunostimulatory properties                                                               | Dong Yu, Fu-Gang Zhu, Lakshmi Bhagat, Hui Wang, Ekambar R. Kandimalla, Ruiwen Zhang, and Sudhir Agrawal                                        | 83  |
| Correlation between cellular localization of TEL/AML1 fusion protein and repression of AML1-mediated transactivation of CR1 gene                                                | Jae Kyun Rho, Jae Hyun Kim, Jiyeon Yu, and Soo Young Choe                                                                                      | 91  |
| cDNA cloning and characterization of Drb1, a new member of RRM-type neural RNA-binding protein                                                                                  | Hiroshi Tamada, Eiji Sakashita, Kuniko Shimazaki, Eriko Ueno, Toshiro Hamamoto, Yasuo Kagawa, and Hitoshi Endo                                 | 96  |
| Mixed lineage kinase ZAK utilizing MKK7 and not MKK4 to activate the c-Jun N-terminal kinase and playing a role in the cell arrest                                              | Jaw-Ji Yang                                                                                                                                    | 105 |
| Dual abnormal effects of mutant MITF encoded by <i>Mt<sup>wh</sup></i> allele on mouse mast cells: decreased but recognizable transactivation and inhibition of transactivation | Tatsuki R. Kataoka, Eiichi Morii, Keisuke Oboki, Tomoko Jippo, Kazutaka Maeyama, and Yukihiro Kitamura                                         | 111 |
| The role of Sp1 in BMP2-up-regulated Erk2 gene expression                                                                                                                       | Xiaoyun Xing, Paul R. Manske, Yen-Yao Li, and Jueren Lou                                                                                       | 116 |
| Hypermethylation and histone deacetylation lead to silencing of the maspin gene in human breast cancer                                                                          | Nicolai Maass, Marco Biallek, Frank Rösel, Christian Schem, Nobuyuki Ohike, Ming Zhang, Walter Jonat, and Koichi Nagasaki                      | 125 |
| Heat-shock protein 90 complexes in resting and thrombin-activated platelets                                                                                                     | Sudawadee Suttitanamongkol, Renata Polanowska-Grabowska, and Adrian R.L. Gear                                                                  | 129 |
| Insulin suppression of VLDL apo B secretion is not mediated by the LDL receptor                                                                                                 | Doru V. Chirieac, Joanne Cianci, Heidi L. Collins, Janet D. Sparks, and Charles E. Sparks                                                      | 134 |
| The structure of an endomorphin analogue incorporating 1-aminocyclohexane-1-carboxylic acid for proline is similar to the $\beta$ -turn of Leu-enkephalin                       | Mitsunobu Doi, Akiko Asano, Eri Komura, and Yoko Ueda                                                                                          | 138 |



|                                                                                                                                                                           |                                                                                                                                                                         |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| A flat squared conformation of an<br>ascidiacyclamide derivative caused by chiral<br>modification of an oxazoline residue                                                 | Akiko Asano, Takeshi Yamada,<br>Atsushi Numata, Yoshio Katsuya,<br>Masahiro Sasaki, Taizo Taniguchi,<br>and Mitsunobu Doi                                               | 143 |
| HIPK2 associates with RanBPM                                                                                                                                              | Ying Wang, E. Marion Schneider, Xin Li,<br>Irina Duttenhöfer, Klaus-Michael Debatin,<br>and Hubert Hug                                                                  | 148 |
| Phe <sup>475</sup> and Glu <sup>446</sup> but not Ser <sup>445</sup><br>participate in ATP-binding to the<br>$\alpha$ -subunit of Na <sup>+</sup> /K <sup>+</sup> -ATPase | Martin Kubala, Kateina Hofbauerová,<br>Rüdiger Ettrich, Vladimír Kopecký Jr.,<br>Rita Krumscheid, Jaromír Plášek,<br>Jan Teisinger, Wilhelm Schoner,<br>and Evžen Amler | 154 |

Number 2, September 20, 2002

## EDITORIAL

|                                              |               |     |
|----------------------------------------------|---------------|-----|
| Greed takes over "our" yeast genome sequence | André Goffeau | 161 |
|----------------------------------------------|---------------|-----|

## BREAKTHROUGHS AND VIEWS

|                                                                                                             |                                         |     |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----|
| Redox- and oxidant-mediated regulation of<br>interleukin-10: an anti-inflammatory,<br>antioxidant cytokine? | John J. Haddad and Christian S. Fahlman | 163 |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----|

## REGULAR ARTICLES

|                                                                                                                                                                                   |                                                                                                                    |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----|
| Differentiation of embryonic stem cells into<br>retinal neurons                                                                                                                   | Xing Zhao, Jianuo Liu, and Iqbal Ahmad                                                                             | 177 |
| Induction of apoptosis and inhibition of cell<br>growth by developmental regulator hTBX5                                                                                          | Ming-Liang He, Ying Chen,<br>Ying Peng, Dadao Jin, Dan Du,<br>Jun Wu, Ping Lu, Marie C. Lin,<br>and Hsiang-Fu Kung | 185 |
| Peroxisome proliferator-activated receptor<br>ligands negatively regulate the expression of<br>the high-affinity IgE receptor Fc $\epsilon$ RI in human<br>basophilic KU812 cells | Yoshinori Fujimura, Hirofumi Tachibana,<br>and Koji Yamada                                                         | 193 |
| Stereoselective hydroxylation of<br>4-methyl-2-cyclohexenone in rats: its relevance<br>to <i>R</i> -(+)-pulegone-mediated hepatotoxicity                                          | K.M. Madyastha and C. Paul Raj                                                                                     | 202 |
| Thiol-bearing synthetic peptides retain the<br>antioxidant activity of apolipoproteinA-I <sub>Milano</sub>                                                                        | Zhen Jia, Pradeep Natarajan,<br>Trudy M. Forte, and John K. Bielicki                                               | 206 |
| Two verprolin homology domains increase the<br>Arp2/3 complex-mediated actin polymerization<br>activities of N-WASP and WAVE1 C-terminal<br>regions                               | Hideki Yamaguchi, Hiroaki Miki,<br>and Tadaomi Takenawa                                                            | 214 |

|                                                                                                                                                                  |                                                                                                                                                                            |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Visible region MCD and MLD spectra of nitrosylferrohemoglobin and oxyhemoglobin                                                                                  | Linda L. Pearce, Emile L. Bominaar, and Jim Peterson                                                                                                                       | 220 |
| Continuous heat shock enhances translational initiation directed by internal ribosomal entry site                                                                | Yoon Ki Kim and Sung Key Jang                                                                                                                                              | 224 |
| A novel $\beta$ -diketone-cleaving enzyme from <i>Acinetobacter johnsonii</i> : acetylacetone 2,3-oxygenase                                                      | Grit Straganz, Lothar Brecker, Hans-Jorg Weber, Walter Steiner, and Douglas W. Ribbons                                                                                     | 232 |
| Malignant reversion of a human osteosarcoma cell line, Saos-2, by inhibition of NF $\kappa$ B                                                                    | Valentine B. Andela, Tzong-Jen Sheu, Edward J. Puzas, Edward M. Schwarz, Regis J. O'Keefe, and Randy N. Rosier                                                             | 237 |
| Isolation and characterization of <i>Sphingomonas</i> sp. GTIN11 capable of carbazole metabolism in petroleum                                                    | John J. Kilbane II, Amrutha Daram, Javaneh Abbasian, and Kevin J. Kayser                                                                                                   | 242 |
| Serum increases CYP1A1 induction by 3-methylcholanthrene                                                                                                         | Quoc-Binh N'Guyen, Frederique Fallone, Eric Seree, Frederic Fina, Pierre-Henri Villard, Nolwen Guigal, Michel De Meo, Bruno Lacarelle, Pierre-Marie Martin, and Yves Barra | 249 |
| TGF- $\beta$ 1 and HGF coordinately facilitate collagen turnover in subepithelial mesenchyme                                                                     | Tsutomu Inoue, Hirokazu Okada, Tatsuya Kobayashi, Yusuke Watanabe, Tomohiro Kikuta, Yoshihiko Kanno, Masaharu Takigawa, and Hiromichi Suzuki                               | 255 |
| Phosphoinositide 3-kinase C2 $\alpha$ is activated upon smooth muscle cell migration and regulated by $\alpha_v\beta_3$ integrin engagement                      | Frédérique Paulhe, Bertrand Perret, Hugues Chap, Niggi Iberg, Olivier Morand, and Claire Racaud-Sultan                                                                     | 261 |
| A method to detect major serotypes of foot-and-mouth disease virus                                                                                               | Richard A. Collins, Lung-Sang Ko, King Yip Fung, Lok-Ting Lau, Jun Xing, and Albert C.H. Yu                                                                                | 267 |
| Characteristics of the end-joining of DNA double-strand breaks by the ataxia-telangiectasia nuclear extract                                                      | Akira Tachibana and Masao S. Sasaki                                                                                                                                        | 275 |
| Enhancing oxidative resistance of <i>Agrobacterium radiobacter</i> N-carbamoyl D-amino acid amidohydrolase by engineering solvent-accessible methionine residues | Hung-Chien Roger Chien, Chuan-Long Hsu, Hui-Yu Hu, Wen-Ching Wang, and Wen-Hwei Hsu                                                                                        | 282 |
| Oxidoreductive modification of two cysteine residues in paired domain by Ref-1 regulates DNA-binding activity of Pax-8                                           | Xia Cao, Fukushi Kambe, Sachiko Ohmori, and Hisao Seo                                                                                                                      | 288 |
| Calpain is required for MMP-2 and u-PA expression in SV40 large T-antigen-immortalized cells                                                                     | Lynne-Marie Postovit, Previn Dutt, Nathalie Dourdin, Minwoo Park, Peter A. Greer, Charles H. Graham, and John S. Elce                                                      | 294 |

|                                                                                                                                                                                    |                                                                                                                                                                                                                    |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Comparison of Na <sup>+</sup> /Ca <sup>2+</sup> exchanger current and of its response to isoproterenol between acutely isolated and short-term cultured adult ventricular myocytes | V.K. Pabbathi, Y.H. Zhang, J.S. Mitcheson, A.K. Hinde, L. Perchenet, L.A. Arberry, A.J. Levi, and J.C. Hancox                                                                                                      | 302 |
| C-terminal lysine truncation increases thermostability and enhances chaperone-like function of porcine $\alpha$ B-crystallin                                                       | Jiahn-Haur Liao, Jiahn-Shing Lee, and Shyh-Horng Chiou                                                                                                                                                             | 309 |
| Overexpressed chloride intracellular channel protein CLIC4 (p64H1) is an essential component of novel plasma membrane anion channels                                               | I. Proutski, N. Karoulias, and R.H. Ashley                                                                                                                                                                         | 317 |
| IF3, a novel cell-differentiation factor, highly expressed in murine liver and ovary                                                                                               | Hiroshi Mano, Sachie Nakatani, Rika Aoyagi, Rina Ishii, Yuka Iwai, Nanako Shimoda, Yuko Jincho, Hitoshi Hiura, Minako Hirose, Chikako Mochizuki, Motoko Yuri, Ryang Hyock Im, Ulala Funada-Wada, and Masahiro Wada | 323 |
| IL-15 up-regulates iNOS expression and NO production by gingival epithelial cells                                                                                                  | Manabu Yanagita, Yoshio Shimabukuro, Takenori Nozaki, Naoko Yoshimura, Junko Watanabe, Hiroko Koide, Mami Terakura, Teruyuki Saho, Masahide Takedachi, Myoung-Ho Jang, Hiroshi Kiyono, and Shinya Murakami         | 329 |
| Rat parietal cells express CCK <sub>2</sub> receptor mRNA: gene expression analysis of single cells isolated by laser-assisted microdissection                                     | Karin Tømmerås, Ingunn Bakke, Arne K. Sandvik, Erik Larsson, and Helge L. Waldum                                                                                                                                   | 335 |
| The specific mitochondrial DNA polymorphism found in Klinefelter's syndrome                                                                                                        | Haruna Oikawa, Zaw Tun, David R. Young, Hiroyasu Ozawa, Kentaro Yamazaki, Einosuke Tanaka, and Katsuya Honda                                                                                                       | 341 |
| Hypoxic induction of hypoxia-inducible factor-1 $\alpha$ and oxygen-regulated gene expression in mitochondrial DNA-depleted HeLa cells                                             | Noriko Enomoto, Nobuko Koshikawa, Max Gassmann, Jun-Ichi Hayashi, and Keizo Takenaga                                                                                                                               | 346 |
| Tyrosine phosphorylation of clathrin heavy chain under oxidative stress                                                                                                            | Yoshito Ihara, Chie Yasuoka, Kan Kageyama, Yoshinao Wada, and Takahito Kondo                                                                                                                                       | 353 |
| Antimicrobial peptide defenses of the Tarahumara frog, <i>Rana tarahumarae</i>                                                                                                     | Louise A. Rollins-Smith, Laura K. Reinert, Verma Miera, and J. Michael Conlon                                                                                                                                      | 361 |
| Functional analysis and the molecular dissection of zinc-fingers and homeoboxes 1 (ZHX1)                                                                                           | Kazuya Yamada, Hiroko Kawata, Kaoru Matsuura, Zhangfei Shou, Satoko Hirano, Tetsuya Mizutani, Takashi Yazawa, Miki Yoshino, Toshio Sekiguchi, Takashi Kajitani, and Kaoru Miyamoto                                 | 368 |



|                                                                                                                                               |                                                                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----|
| A role of heparin-binding epidermal growth factor-like growth factor in cardiac remodeling after myocardial infarction                        | Nobuyoshi Tanaka, Katsuhiko Masamura, Masahiro Yoshida, Masayuki Kato, Yasuyuki Kawai, and Isamu Miyamori                                   | 375 |
| Enzymatic synthesis and characterization of oligosaccharides structurally related to the repeating unit of Pullulan                           | Cristiana Campa, Amedeo Vetere, Amelia Gamini, Ivan Donati, and Sergio Paoletti                                                             | 382 |
| Glycine 38 is crucial for the ribonucleolytic activity of human pancreatic ribonuclease on double-stranded RNA                                | Deepak Gaur, Divya Seth, and Janendra K. Batra                                                                                              | 390 |
| Single replication origin of the archaeon <i>Methanosarcina mazei</i> revealed by the Z curve method                                          | Ren Zhang and Chun-Ting Zhang                                                                                                               | 396 |
| Comparative phenotypic analyses of human plasma and urinary retinol binding protein using mass spectrometric immunoassay                      | Urban A. Kiernan, Kemmons A. Tubbs, Dobrin Nedelkov, Eric E. Niederkofler, and Randall W. Nelson                                            | 401 |
| Spectrophotometric investigations with hexa-coordinate ferric lignin peroxidase: does water retention at the active site influence catalysis? | Thomas B. Brück and Patricia J. Harvey                                                                                                      | 406 |
| Elevation of P-glycoprotein function by a catechin in green tea                                                                               | Er-jia Wang, Mary Barecki-Roach, and William W. Johnson                                                                                     | 412 |
| Incadronate disodium inhibits advanced glycation end products-induced angiogenesis in vitro                                                   | Tamami Okamoto, Sho-ichi Yamagishi, Yosuke Inagaki, Shinjiro Amano, Masayoshi Takeuchi, Seiji Kikuchi, Shigeaki Ohno, and Akihiko Yoshimura | 419 |

## ERRATUM

|                                                                                                                                                                                                                                                                                                                                                 |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Volume 223, Number 3 (1996), in the article "HTF: A B-ZIP Transcription Factor That Is Closely Related to the Human XBP/TREB5 and Is Activated by Hepatocellular Carcinoma in Rats" by Toshihiko Kishimoto, Kenji Kokura, Yoichi Kumagai, Toshifumi Wakamatsu, Yasutaka Makino, and Taka-aki Tamura, pages 746–751 (doi:10.1006/bbrc.1996.0962) | 425 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

Number 3, September 27, 2002

## BREAKTHROUGHS AND VIEWS

|                                                                                                                                      |                                                         |     |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----|
| Higher brain functions of PACAP and a homologous <i>Drosophila</i> memory gene <i>amnesiac</i> : insights from knockouts and mutants | Hitoshi Hashimoto, Norihito Shintani, and Akemichi Baba | 427 |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----|

## REGULAR ARTICLES

|                                                                                                                                                   |                                                                                                                                                                            |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Antisense oligonucleotide for tissue factor inhibits hepatic ischemic reperfusion injury                                                          | Kenji Nakamura, Yayoi Kadotani, Hidetaka Ushigome, Kiyokazu Akioka, Masahiko Okamoto, Yoshihiro Ohmori, Takeshi Yaoi, Shinji Fushiki, Rikio Yoshimura, and Norio Yoshimura | 433 |
| Human osteoclasts express oxytocin receptor                                                                                                       | Silvia Colucci, Graziana Colaianni, Giorgio Mori, Maria Grano, and Alberta Zallone                                                                                         | 442 |
| Monitoring the kinetics and thermodynamics of interfacial enzymatic catalysis by differential scanning calorimetry                                | Lifeng Cai, Aoneng Cao, and Luhua Lai                                                                                                                                      | 446 |
| Facilitation of glutamate release by ionotropic glutamate receptors in osteoblasts                                                                | Eiichi Hinoi, Sayumi Fujimori, Takeshi Takarada, Hideo Taniura, and Yukio Yoneda                                                                                           | 452 |
| Specificity of anti-human CD95 (APO-1/Fas) antibodies                                                                                             | Ingo Schmitz, Andreas Krueger, Sven Baumann, Sabine Kirchhoff, and Peter H. Kramer                                                                                         | 459 |
| PNUTS (phosphatase nuclear targeting subunit) inhibits retinoblastoma-directed PP1 activity                                                       | Eshwar Udho, Vivienne C. Tedesco, Adam Zygmunt, and Nancy A. Krucher                                                                                                       | 463 |
| Photosensitizing effect of protoporphyrin IX in pigmented melanoma of mice                                                                        | Petras Juzenas, Asta Juzeniene, Silje Stakland, Vladimir Iani, and Johan Moan                                                                                              | 468 |
| Novel genes cloned from a neuronal cell line newly established from a cerebellum of an adult p53 <sup>-/-</sup> mouse                             | Mitsutoshi Tominaga and Yasuhiro Tomooka                                                                                                                                   | 473 |
| Selective CCL5/RANTES-induced mast cell migration through interactions with chemokine receptors CCR1 and CCR4                                     | Mikael Juremalm, Niclas Olsson, and Gunnar Nilsson                                                                                                                         | 480 |
| Recombinant HBsAg, an apoptotic-like lipoprotein, interferes with the LPS-induced activation of ERK-1/2 and JNK-1/2 in monocytes                  | Peter Vanlandschoot, Annelies Roobrouck, Freya Van Houtte, and Geert Leroux-Roels                                                                                          | 486 |
| Production and secretion of interleukin-1 $\alpha$ proteins by rat testis                                                                         | Katarina Gustafsson, Taranum Sultana, Cecilia K. Zetterström, Brian P. Setchell, Arif Siddiqui, Günther Weber, and Olle Söder                                              | 492 |
| Inhibition of cGMP-dependent protein kinases potently decreases neutrophil spontaneous apoptosis                                                  | Mauro Brunetti, Nicola Mascetra, Stefano Manarini, Nicola Martelli, Chiara Cerletti, Piero Musiani, Francesca B. Aiello, and Virgilio Evangelista                          | 498 |
| Level of sialic acid residues in platelet proteins in diabetes, aging, and Hodgkin's lymphoma: a potential role of free radicals in desialylation | Kalyan Goswami and Bidhan Chandra Koner                                                                                                                                    | 502 |

|                                                                                                                                                                |                                                                                                                                                                |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Delayed treatment with doxycycline has limited effect on anthrax infection in BLK57/B6 mice                                                                    | <b>John Kalns, Julie Morris, Jeffrey Eggers, and Johnathan Kiel</b>                                                                                            | <b>506</b> |
| Identification of the amino acid residues in trichosanthin crucial for IgE response                                                                            | <b>Xuan Cai, Gang Yao, Guofeng Xu, Cuihong Yang, Hong Xu, Ying Lin, Jian Yu, and Bing Sun</b>                                                                  | <b>510</b> |
| Bcl-2-linked apoptosis due to increase in NO synthase in brain of SAMP10                                                                                       | <b>Takuya Numata, Takeshi Saito, Kazuyo Maekawa, Yasumitsu Takahashi, Hiroshi Saitoh, Toshiyuki Hosokawa, Hiroyoshi Fujita, and Masaaki Kurasaki</b>           | <b>517</b> |
| Enhancement of bone repair with a helper-dependent adenoviral transfer of bone morphogenetic protein-2                                                         | <b>Nobuhiro Abe, Yu-Po Lee, Makoto Sato, Xuguang Zhang, Jing Wu, Kohnosuke Mitani, and Jay R. Lieberman</b>                                                    | <b>523</b> |
| Molecular cloning and characterization of <i>CT120</i> , a novel membrane-associated gene involved in amino acid transport and glutathione metabolism          | <b>Xianghuo He, Yujun Di, Jinjun Li, Yihu Xie, Yuntian Tang, Fengrui Zhang, Lin Wei, Yu Zhang, Wenxin Qin, Keke Huo, Yuyang Li, Dafang Wan, and Jianren Gu</b> | <b>528</b> |
| Expression profiles of 109 apoptosis pathway-related genes in 82 mouse tissues and experimental conditions                                                     | <b>Jianhua Zhang, Ming Xu, and Bruce Aronow</b>                                                                                                                | <b>537</b> |
| Stability of phospholipase D in primary astrocytes                                                                                                             | <b>Shenchu Jin, Beate Schatter, Oksana Weichel, Ivan Walev, SungHo Ryu, and Jochen Klein</b>                                                                   | <b>545</b> |
| S-Nitrosoglutathione induces functional $\Delta F508$ -CFTR in airway epithelial cells                                                                         | <b>Charlotte Andersson, Benjamin Gaston, and Godfried M. Roomans</b>                                                                                           | <b>552</b> |
| Polymorphisms of estrogen receptor $\alpha$ gene in endometrial cancer                                                                                         | <b>Masahiro Sasaki, Yuichiro Tanaka, Masanori Kaneuchi, Noriaki Sakuragi, and Rajvir Dahiya</b>                                                                | <b>558</b> |
| Glycosylation of $\beta_1$ -adrenergic receptors regulates receptor surface expression and dimerization                                                        | <b>Junqi He, Jianguo Xu, Amanda M. Castleberry, Anthony G. Lau, and Randy A. Hall</b>                                                                          | <b>565</b> |
| Differential processing of the <i>Xenopus</i> ATP(CTP):tRNA nucleotidyltransferase mRNA                                                                        | <b>Brian T. Keady, Kathleen R. Attfield, and Laura E. Hake</b>                                                                                                 | <b>573</b> |
| Ubiquinol inhibition of neutral sphingomyelinase in liver plasma membrane: specific inhibition of the $Mg^{2+}$ -dependent enzyme and role of isoprenoid chain | <b>Sergio F. Martín, Consuelo Gómez-Díaz, Plácido Navas, and José M. Villalba</b>                                                                              | <b>581</b> |
| The nucleotide-independent Fe(III)-binding site is located on $\beta$ subunit of the mitochondrial $F_1$ -ATPase                                               | <b>G. Lippe, F. Di Pancrazio, S. Contessi, N. Bortolotti, F. Polizio, and I. Mavelli</b>                                                                       | <b>587</b> |
| Binding and dissociation of human topoisomerase I with hairpin-loop RNAs: implications for the regulation of HIV-1 replication                                 | <b>Hidehiro Takahashi, Hirofumi Sawa, Hideki Hasegawa, Tetsutaro Sata, William W. Hall, and Takeshi Kurata</b>                                                 | <b>593</b> |



|                                                                                                                                                          |                                                                                                                                                                                                       |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Phytosphingosine 1-phosphate: a high affinity ligand for the S1P <sub>4</sub> /Edg-6 receptor                                                            | Mari Rios Candelore, Michael J. Wright, Laurie M. Tota, James Milligan, Gan-ju Shei, James D. Bergstrom, and Suzanne M. Mandala                                                                       | 600 |
| The homeobox gene Cdx1 belongs to the p53-p21 <sup>WAF</sup> -Bcl-2 network in intestinal epithelial cells                                               | Virginie Moucadel, Maria Serena Totaro, Claire Domon Dell, Philippe Soubeyran, Jean Charles Dagorn, Jean Noel Freund, and Juan Lucio Iovanna                                                          | 607 |
| Specific binding of a protein to a novel DNA element in the cyanobacterial small heat-shock protein gene                                                 | Kouji Kojima and Hitoshi Nakamoto                                                                                                                                                                     | 616 |
| Activation of gp120 of human immuno-deficiency virus by their V3 loop-derived peptides                                                                   | Hong Ling, Xiao-Yan Zhang, Osamu Usami, and Toshio Hattori                                                                                                                                            | 625 |
| Molecular cloning of <i>DAX1</i> and <i>SHP</i> cDNAs and their expression patterns in the Nile tilapia, <i>Oreochromis niloticus</i>                    | De-Shou Wang, Tohru Kobayashi, Balasubramanian Senthilkumaran, Fumie Sakai, Cheni Chery Sudhakumari, Taiga Suzuki, Michiyasu Yoshikuni, Masaru Matsuda, Ken-ichirou Morohashi, and Yoshitaka Nagahama | 632 |
| TWIST inactivation reduces CBFA1/RUNX2 expression and DNA binding to the osteocalcin promoter in osteoblasts                                             | Malika Yousfi, Françoise Lasmoles, Brigitt Kern, and Pierre J. Marie                                                                                                                                  | 641 |
| Distinctive dendritic cell modulation by vitamin D <sub>3</sub> and glucocorticoid pathways                                                              | Nianzeng Xing, Monica L. Maldonado, Lori A. Bachman, David J. McKean, Rajiv Kumar, and Matthew D. Griffin                                                                                             | 645 |
| Effect of Mg <sup>2+</sup> on the kinetics of guanine nucleotide binding and hydrolysis by Cdc42                                                         | Ju Zhao, Wei-Ning Wang, Ying-Cai Tan, Yi Zheng, and Zhi-Xin Wang                                                                                                                                      | 653 |
| Dimerization of morphine and orphanin FQ/nociceptin receptors: generation of a novel opioid receptor subtype                                             | Ying-Xian Pan, Elizabeth Bolan, and Gavril W. Pasternak                                                                                                                                               | 659 |
| Sustained activation of MEK1-ERK1/2 pathway in membrane skeleton occurs dependently on cell adhesion in megakaryocytic differentiation                   | Chisato Mizutani, Yumi Tohyama, Yasuo Miura, Terutoshi Hishita, Toshio Nishihara, Hirohei Yamamura, Satoshi Ichiyama, Takashi Uchiyama, and Kaoru Tohyama                                             | 664 |
| Leptin improves membrane fluidity of erythrocytes in humans via a nitric oxide-dependent mechanism—an electron paramagnetic resonance investigation      | Kazushi Tsuda, Keizo Kimura, and Ichiro Nishio                                                                                                                                                        | 672 |
| Epstein-Barr virus BHRF1 functions downstream of Bid cleavage and upstream of mitochondrial dysfunction to inhibit TRAIL-induced apoptosis in BJAB cells | Michiko Kawanishi, Saeko Tada-Oikawa, and Shosuke Kawanishi                                                                                                                                           | 682 |

Number 4, October 4, 2002

**EDITORIAL**

- The systems approach to evolution R.J.P. Williams and J.J.R. Fraústo da Silva 689

**BREAKTHROUGHS AND VIEWS**

- Cytokines and related receptor-mediated signaling pathways John J. Haddad 700

**REGULAR ARTICLES**

- Photoaffinity labeling of proteins in bovine testis nuclear extract Natalia A. Lebedeva, Nadejda I. Rechkunova, Svetlana N. Khodyreva, Alain Favre, and Olga I. Lavrik 714

- M6a acts as a nerve growth factor-gated  $\text{Ca}^{2+}$  channel in neuronal differentiation S. Mukobata, T. Hibino, A. Sugiyama, Y. Urano, A. Inatomi, Y. Kanai, H. Endo, and F. Tashiro 722

- Altered profile of gene expression in rat hearts induced by chronic nicotine consumption Dahai Hu, Kun Cao, Robert Peterson-Wakeman, and Rui Wang 729

- Tep22*, a novel testicular expressed gene, is involved in the biogenesis of the acrosome and the midpiece of the sperm tail Jürgen Neesen, Tobias Hartwich, Gunnar Brandhorst, Gerhard Aumüller, Birgitta Gläser, Peter Burfeind, and Irene Mendoza-Lujambio 737

- Three-dimensional electron microscopy of the reverse gyrase from *Sulfolobus tokodaii* Kyoko Matoba, Kouta Mayanagi, Syo Nakasu, Akihiko Kikuchi, and Kosuke Morikawa 749

- Gammaherpesviruses encode functional dihydrofolate reductase activity Gábor Gáspár, Erik De Clercq, and Johan Neyts 756

- Regulation of myeloma cell growth through Akt/Gsk3/forkhead signaling pathway Maaza G-Amlak, Shahab Uddin, Dolores Mahmud, Ingrid Damacela, Donald Lavelle, Maqbool Ahmed, Koen van Besien, and Amittha Wickrema 760

- Evidence for the role of promoter methylation in the regulation of MMP-9 gene expression Éric Chicoine, Pierre-Olivier Estève, Olivier Robledo, Céline Van Themsche, Edouard F. Potworowski, and Yves St-Pierre 765

- Phosphorylation of CPI17 and myosin binding subunit of type 1 protein phosphatase by p21-activated kinase Norio Takizawa, Yasuhiko Koga, and Mitsuo Ikebe 773

|                                                                                                                                                    |                                                                                                                                                                                                                    |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Enhancement of phage-mediated gene transfer by nuclear localization signal                                                                         | <b>Teruo Akuta, Akiko Eguchi, Hajime Okuyama, Takao Senda, Hachiro Inokuchi, Yosuke Suzuki, Emi Nagoshi, Hiroyuki Mizuguchi, Takao Hayakawa, Katsuo Takeda, Mamoru Hasegawa, and Mahito Nakanishi</b>              | <b>779</b> |
| Interaction of STOP with neuronal tubulin is independent of polyglutamylation                                                                      | <b>Crystel Bonnet, Eric Denarier, Christophe Bosc, Sylvie Lazereg, Philippe Denoulet, and Jean-Christophe Larcher</b>                                                                                              | <b>787</b> |
| TGF- $\beta_1$ induces peroxisome proliferator-activated receptor $\gamma 1$ and $\gamma 2$ expression in human THP-1 monocytes                    | <b>Ulrich Kintscher, Shu Wakino, Dennis Bruemmer, Stephan Goetze, Kristof Graf, Willa A. Hsueh, and Ronald E. Law</b>                                                                                              | <b>794</b> |
| Dephosphorylation of Tctex2-related dynein light chain by type 2A protein phosphatase                                                              | <b>Kazuo Inaba</b>                                                                                                                                                                                                 | <b>800</b> |
| Sphingosine kinase-dependent directional migration of leukocytes in response to phorbol ester                                                      | <b>Nicole C. Kaneider, Angela Djanani, Reiner Fischer-Colbrie, and Christian J. Wiedermann</b>                                                                                                                     | <b>806</b> |
| The nuclear isoform of protein-tyrosine phosphatase TC-PTP regulates interleukin-6-mediated signaling pathway through STAT3 dephosphorylation      | <b>Tetsuya Yamamoto, Yuichi Sekine, Keiichi Kashima, Atsuko Kubota, Noriko Sato, Naohito Aoki, and Tadashi Matsuda</b>                                                                                             | <b>811</b> |
| Cloning of human, murine, and marsupial keratin 7 and a survey of K7 expression in the mouse                                                       | <b>Frances J.D. Smith, Rebecca M. Porter, Laura D. Corden, Declan P. Lunny, E. Birgitte Lane, and W.H. Irwin McLean</b>                                                                                            | <b>818</b> |
| Somatostatin receptor subtype 1-selective activation reduces cell growth and calcitonin secretion in a human medullary thyroid carcinoma cell line | <b>Maria C. Zatelli, Federico Tagliati, Daniela Piccin, John E. Taylor, Michael D. Culler, Marta Bondanelli, and Ettore C. degli Uberti</b>                                                                        | <b>828</b> |
| Identification of a novel human nicotinamide mononucleotide adenylyltransferase                                                                    | <b>Nadia Raffaelli, Leonardo Sorci, Adolfo Amici, Monica Emanuelli, Francesca Mazzola, and Giulio Magni</b>                                                                                                        | <b>835</b> |
| Expression of a green fluorescence protein-carrier protein into mouse spermatozoa                                                                  | <b>Teresa Mogas, Josep M. Fernández-Novell, Maria Jesús Palomo, Pedro J. Otaegui, Roger R. Gomis, Joan Ballester, Dolors Izquierdo, Joan J. Guinovart, Joan C. Ferrer, Teresa Rigau, and Joan E. Rodríguez-Gil</b> | <b>841</b> |
| Retinitis pigmentosa-associated rhodopsin mutations in three membrane-located cysteine residues present three different biochemical phenotypes     | <b>Githa Breikers, Margriet J.M. Portier-VandeLuytgaarden, Petra H.M. Bovee-Geurts, and Willem J. DeGrip</b>                                                                                                       | <b>847</b> |



|                                                                                                                                                                                                                                                    |                                                                                                                          |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----|
| Regulation and the role of Cu,Zn-containing superoxide dismutase in cell cycle progression of <i>Schizosaccharomyces pombe</i>                                                                                                                     | Joon Lee, Eun-Soo Kwon, Dong-Wook Kim, Joonseok Cha, and Jung-Hye Roe                                                    | 854 |
| Semicarbazide-sensitive amine oxidase in aortic smooth muscle cells mediates synthesis of a methylglyoxal-AGE: implications for vascular complications in diabetes                                                                                 | Kenneth C. Mathys, Stephen N. Ponnampalam, Simi Padival, and Ram H. Nagaraj                                              | 863 |
| <i>HAND1</i> and <i>HAND2</i> are expressed in the adult-rodent heart and are modulated during cardiac hypertrophy                                                                                                                                 | Bijoy D. Thattaliyath, Carolina B. Livi, Mark E. Steinhelper, Glenn M. Toney, and Anthony B. Firulli                     | 870 |
| The death-inducing signalling complex is recruited to lipid rafts in Fas-induced apoptosis                                                                                                                                                         | D. Scheel-Toellner, K. Wang, R. Singh, S. Majeed, K. Raza, S.J. Curnow, M. Salmon, and J.M. Lord                         | 876 |
| TRAIL-induced apoptosis is independent of the mitochondrial apoptosis mediator DAP3                                                                                                                                                                | Thorsten Berger and Matthias Kretzler                                                                                    | 880 |
| Influence on the plasma membrane of <i>Candida albicans</i> by HP (2–9)–magainin 2 (1–12) hybrid peptide                                                                                                                                           | Dong Gun Lee, Yoonkyung Park, Pyoung Il Kim, Hye Gwang Jeong, Eun-Rhan Woo, and Kyung-Soo Hahm                           | 885 |
| Expression of PTHrP and its cognate receptor in the rheumatoid synovial microcirculation                                                                                                                                                           | J.L. Funk, H. Wei, K.J. Downey, D. Yocum, J.B. Benjamin, and W. Carley                                                   | 890 |
| Modulation of G <sub>iα2</sub> signaling by the axonal guidance molecule UNC5H2                                                                                                                                                                    | Katsumi Komatsuzaki, Sussie Dalvin, and T. Bernard Kinane                                                                | 898 |
| Leptin enhances the effect of transforming growth factor β in increasing type I collagen formation                                                                                                                                                 | Mei Tang, James J. Potter, and Esteban Mezey                                                                             | 906 |
| Characterization of the novel human transmembrane protein 9 (TMEM9) that localizes to lysosomes and late endosomes                                                                                                                                 | Marit Kveine, Ellen Tenstad, Guri Døsen, Steinar Funderud, and Edith Rian                                                | 912 |
| A selective lignin-degrading fungus, <i>Ceriporiopsis subvermispota</i> , produces alkylitaconates that inhibit the production of a cellulolytic active oxygen species, hydroxyl radical in the presence of iron and H <sub>2</sub> O <sub>2</sub> | Takashi Watanabe, Hiroko Teranishi, Yoichi Honda, and Masaaki Kuwahara                                                   | 918 |
| Acute arsenite-induced 8-hydroxyguanine is associated with inhibition of repair activity in cultured human cells                                                                                                                                   | Nan Mei, Naoki Kunugita, Takeshi Hirano, and Hiroshi Kasai                                                               | 924 |
| Angiotensins II and IV stimulate the activity of tyrosine kinases in estrogen-induced rat pituitary tumors                                                                                                                                         | Agnieszka Lachowicz Ochędalska, Elbieta Rębas, Jolanta Kunert-Radek, Marie-Claude Fournie-Zaluski, and Marek Pawlikowski | 931 |
| Molecular mechanisms of anti-angiogenic effect of curcumin                                                                                                                                                                                         | Anupama E. Gururaj, Madesh Belakavadi, Deepak A. Venkatesh, Dieter Marmé, and Bharathi P. Salimath                       | 934 |

|                                                                                                                                                                                |                                                                                                                                                                       |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Relationship of Mcl-1 isoforms, ratio p21WAF1/cyclin A, and Jun kinase phosphorylation to apoptosis in human breast carcinomas                                                 | <b>Manuel Rieber, Jose D. Medina, and Mary Strasberg-Rieber</b>                                                                                                       | <b>943</b>  |
| The $\beta$ subunit of <i>Aquifex aeolicus</i> leucyl-tRNA synthetase is responsible for cognate tRNA recognition                                                              | <b>Masaki Gouda, Takashi Yokogawa, and Kazuya Nishikawa</b>                                                                                                           | <b>950</b>  |
| Mouse methionine sulfoxide reductase B: effect of selenocysteine incorporation on its activity and expression of the seleno-containing enzyme in bacterial and mammalian cells | <b>Shoshana Bar-Noy and Jackob Moskovitz</b>                                                                                                                          | <b>956</b>  |
| Folding, stability, and secondary structure of a new dimeric cysteine proteinase inhibitor                                                                                     | <b>Marjetka Kidrič, Heinz Fabian, Jože Brzin, Tatjana Popovič, and Roger H. Pain</b>                                                                                  | <b>962</b>  |
| Transaldolase exhibits a protective role against menadione toxicity in <i>Xanthomonas campestris</i> pv. <i>phaseoli</i>                                                       | <b>Paiboon Vatanaviboon, Tanutra Varaluksit, Chotirote Seeanukun, and Skorn Mongkolsuk</b>                                                                            | <b>968</b>  |
| The ABCA1 transporter functions on the basolateral surface of hepatocytes                                                                                                      | <b>Edward B. Neufeld, Steven J. Demosky Jr., John A. Stonik, Christian Combs, Alan T. Remaley, Nicolas Duverger, Silvia Santamarina-Fojo, and H. Bryan Brewer Jr.</b> | <b>974</b>  |
| Palmitoylation-defective asialoglycoprotein receptors are normal in their cellular distribution and ability to bind ligand, but are defective in ligand uptake and degradation | <b>Jasper H.N. Yik, Amit Saxena, Janet A. Weigel, and Paul H. Weigel</b>                                                                                              | <b>980</b>  |
| Aquaporin 4 expression in the mammalian inner ear and its role in hearing                                                                                                      | <b>Anand N. Mhatre, Ryan E. Stern, Jiang Li, and Anil K. Lalwani</b>                                                                                                  | <b>987</b>  |
| Dynamics of $\text{Ca}^{2+}$ /calmodulin-dependent protein kinase II following acute myocardial ischemia—translocation and autophosphorylation                                 | <b>Arata Uemura, Yasuhito Naito, and Tatsuaki Matsubara</b>                                                                                                           | <b>997</b>  |
| Oxidative stress induced by ciprofloxacin in <i>Staphylococcus aureus</i>                                                                                                      | <b>M.C. Becerra and I. Albesa</b>                                                                                                                                     | <b>1003</b> |
| Crystallization and preliminary X-ray diffraction studies of cobra venom $\beta$ -nerve growth factor                                                                          | <b>Lichuan Gu, Yuequan Shen, Sujuan Xu, Yuyan Shu, Tao Jiang, and Zhengjiong Lin</b>                                                                                  | <b>1008</b> |
| NMR and CD studies on the interaction of Alzheimer $\beta$ -amyloid peptide (12–28) with $\beta$ -cyclodextrin                                                                 | <b>Xu-rong Qin, Hiroshi Abe, and Hiroshi Nakanishi</b>                                                                                                                | <b>1011</b> |
| Site-directed mutagenesis of <i>Aspergillus niger</i> NRRL 3135 phytase at residue 300 to enhance catalysis at pH 4.0                                                          | <b>Edward J. Mullaney, Catherine B. Daly, Taewan Kim, Jesus M. Porres, Xin Gen Lei, Kandan Sethumadhavan, and Abul H.J. Ullah</b>                                     | <b>1016</b> |

|                                                                                                                                                                             |                                                                                                      |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------|
| Differential inhibition of 30S and 70S translation initiation complexes on leaderless mRNA by kasugamycin                                                                   | Isabella Moll and Udo Bläsi                                                                          | 1021 |
| The role of metal on imide hydrolysis: metal content and pH profiles of metal ion-replaced mammalian imidase                                                                | Cheng-Yang Huang and Yuh-Shyong Yang                                                                 | 1027 |
| Cloning and functional characterization of ACAD-9, a novel member of human acyl-CoA dehydrogenase family                                                                    | Jia Zhang, Weiping Zhang, Dajin Zou, Guoyou Chen, Tao Wan, Minghui Zhang, and Xuetao Cao             | 1033 |
| Differential expression of cholinephosphotransferase in normal and cancerous human mammary epithelial cells                                                                 | Aparajita Ghosh, Jacqueline Akech, Shyamali Mukherjee, and Salil K. Das                              | 1043 |
| The <i>Caenorhabditis elegans</i> ortholog of human <i>PHF5a</i> shows a muscle-specific expression domain and is essential for <i>C. elegans</i> morphogenetic development | R. Trappe, E. Schulze, T. Rzymiski, S. Fröde, and W. Engel                                           | 1049 |
| G-CSF stimulates angiogenesis and promotes tumor growth: potential contribution of bone marrow-derived endothelial progenitor cells                                         | Takeshi Natori, Masataka Sata, Miwa Washida, Yasunobu Hirata, Ryoza Nagai, and Masatoshi Makuuchi    | 1058 |
| Involvement of redox events in caspase activation in zinc-depleted airway epithelial cells                                                                                  | Joanne E. Carter, Ai Q. Truong-Tran, Dion Grosser, Lien Ho, Richard E. Ruffin, and Peter D. Zalewski | 1062 |

Number 5, October 11, 2002

## INTERVIEW

|                                  |                 |      |
|----------------------------------|-----------------|------|
| A conversation with Wan Kyoo Cho | K. Noelle Gracy | 1071 |
|----------------------------------|-----------------|------|

## REGULAR ARTICLES

|                                                                                                                                       |                                                                                                                |      |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------|
| Novel human prostate-specific cDNA: molecular cloning, expression, and immunobiology of the recombinant protein                       | Rajesh K. Naz, Ramasamy Santhanam, and Neetu Tyagi                                                             | 1075 |
| Crystallization and characterization of Smaug: a novel RNA-binding motif                                                              | Justin B. Green, Thomas A. Edwards, Jose Trincao, Carlos R. Escalante, Robin P. Wharton, and Aneel K. Aggarwal | 1085 |
| Identification and characterization of a third gastrin response element (GAS-RE3) in the human histidine decarboxylase gene promoter  | Raktima Raychowdhury, John V. Fleming, John T. McLaughlin, Clemens J. Bulitta, and Timothy C. Wang             | 1089 |
| Change of product specificity of hexaprenyl diphosphate synthase from <i>Sulfolobus solfataricus</i> by introducing mimetic mutations | Hisashi Hemmi, Motoyoshi Noike, Toru Nakayama, and Tokuzo Nishino                                              | 1096 |



|                                                                                                                                                                      |                                                                                                                                                                                                   |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Prostaglandin F <sub>2α</sub> stimulates tyrosine phosphorylation of phospholipase C-γ1                                                                              | <b>Shahid Husain and Farahdiba Jafri</b>                                                                                                                                                          | <b>1102</b> |
| Leucine stimulates the secretion of hepatocyte growth factor by hepatic stellate cells                                                                               | <b>Tomoaki Tomiya, Yukiko Inoue, Mikio Yanase, Masahiro Arai, Hitoshi Ikeda, Kazuaki Tejima, Kayo Nagashima, Takako Nishikawa, and Kenji Fujiwara</b>                                             | <b>1108</b> |
| Ligand-specific control of <i>src</i> -suppressed C kinase substrate gene expression                                                                                 | <b>Stephen R. Coats, Lil M. Pabón-Peña, Joseph W. Covington, and Douglas E. Vaughan</b>                                                                                                           | <b>1112</b> |
| Delivery of nucleic acid into mammalian cells by anthrax toxin                                                                                                       | <b>Reetika Gaur, Pradeep K. Gupta, Anita Goyal, Winfried Wels, and Yogendra Singh</b>                                                                                                             | <b>1121</b> |
| Inhibition of the expression of α-smooth muscle actin in human hepatic stellate cell line, LI90, by a selective cyclooxygenase 2 inhibitor, NS-398                   | <b>Jidong Cheng, Hiroyasu Imanishi, Weidong Liu, Atara Iwasaki, Noboru Ueki, Hideji Nakamura, and Toshikazu Hada</b>                                                                              | <b>1128</b> |
| Splicing mutation of the prostacyclin synthase gene in a family associated with hypertension                                                                         | <b>Tomohiro Nakayama, Masayoshi Soma, Yoshiyasu Watanabe, Buaijiaer Hasimu, Mikano Sato, Noriko Aoi, Kotoko Kosuge, Katsuo Kanmatsuse, Shinichiro Kokubun, Jason D. Marrow, and John A. Oates</b> | <b>1135</b> |
| Characterization of the short neuropeptide F receptor from <i>Drosophila melanogaster</i>                                                                            | <b>Inge Mertens, Tom Meeusen, Roger Huybrechts, Arnold De Loof, and Liliane Schoofs</b>                                                                                                           | <b>1140</b> |
| <i>Porphyromonas gingivalis</i> lipopolysaccharide interferes with salivary mucin synthesis through inducible nitric oxide synthase activation by ERK and p38 kinase | <b>Bronislaw L. Slomiany and Amalia Slomiany</b>                                                                                                                                                  | <b>1149</b> |
| Molecular model of cyclin-dependent kinase 5 complexed with roscovitine                                                                                              | <b>Walter Filgueira de Azevedo Jr., Renato Tadeu Gaspar, Fernanda Canduri, João Carlos Camera Jr., and Nelson José Freitas da Silveira</b>                                                        | <b>1154</b> |
| Novel human cDNAs homologous to <i>Drosophila Orct</i> and mammalian carnitine transporters                                                                          | <b>Satish A. Eraly and Sanjay K. Nigam</b>                                                                                                                                                        | <b>1159</b> |
| Reconstruction of glycosaminoglycan chains in decorin                                                                                                                | <b>Mito Iwafune, Ikuko Kakizaki, Masahiro Yukawa, Daisuke Kudo, Sakae Ota, Masahiko Endo, and Keiichi Takagaki</b>                                                                                | <b>1167</b> |
| Identification of the <i>hRDH-E2</i> gene, a novel member of the SDR family, and its increased expression in psoriatic lesion                                        | <b>Yasunari Matsuzaka, Koichi Okamoto, Hitomi Tsuji, Tomotaka Mabuchi, Akira Ozawa, Gen Tamiya, and Hidetoshi Inoko</b>                                                                           | <b>1171</b> |

|                                                                                                                                                                                 |                                                                                                                             |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------|
| Vasoactive intestinal peptide and pituitary adenylate cyclase-activating polypeptide inhibit CBP–NF- $\kappa$ B interaction in activated microglia                              | <b>Mario Delgado</b>                                                                                                        | <b>1181</b> |
| Species-specific differences in the usage of several caspase substrates                                                                                                         | <b>Sandra Ussat, Ulf-Eike Werner, and Sabine Adam-Klages</b>                                                                | <b>1186</b> |
| Association of human RAD52 protein with transcription factors                                                                                                                   | <b>Jingmei Liu, Xiangbing Meng, and Zhiyuan Shen</b>                                                                        | <b>1191</b> |
| A new class of tetraspanins in fungi                                                                                                                                            | <b>M. Gourgues, P.-H. Clergeot, C. Veneault, J. Cots, S. Sibuet, A. Brunet-Simon, C. Levis, T. Langin, and M.-H. Lebrun</b> | <b>1197</b> |
| Histamine H <sub>2</sub> receptor-mediated modulation of local cytokine expression in a mouse experimental tumor model                                                          | <b>Kohji Takahashi, Satoshi Tanaka, Kazuyuki Furuta, and Atsushi Ichikawa</b>                                               | <b>1205</b> |
| Vitamin D <sub>3</sub> and analogues modulate the expression of CSF-1 and its receptor in human dendritic cells                                                                 | <b>Kejian Zhu, Regine Gläser, and Ulrich Mrowietz</b>                                                                       | <b>1211</b> |
| NF- $\kappa$ B activates fibronectin gene expression in rat hepatocytes                                                                                                         | <b>Byung-Heon Lee, Seung-Yoon Park, Kae-Bok Kang, Rang-Woon Park, and In-San Kim</b>                                        | <b>1218</b> |
| Defining the boundaries of the testis angiotensin I-converting enzyme ectodomain                                                                                                | <b>Anthony J. Chubb, Sylva L.U. Schwager, Zenda L. Woodman, Mario R.W. Ehlers, and Edward D. Sturrock</b>                   | <b>1225</b> |
| Translocation of Na <sup>+</sup> , K <sup>+</sup> -ATPase is induced by Rho small GTPase in renal epithelial cells                                                              | <b>Akio Maeda, Mutsuki Amano, Yuko Fukata, and Kozo Kaibuchi</b>                                                            | <b>1231</b> |
| Nitration and chlorination of folic acid by peroxynitrite and hypochlorous acid, and the selective binding of 10-nitro-folate to folate receptor $\beta$                        | <b>Motoyuki Nakamura, Ryusaku Nagayoshi, Kosei Ijiri, Noriko Nakashima-Matsushita, Toru Takeuchi, and Takami Matsuyama</b>  | <b>1238</b> |
| The human perforin gene is a direct target of STAT4 activated by IL-12 in NK cells                                                                                              | <b>Koh Yamamoto, Fumi Shibata, Nobuyuki Miyasaka, and Osamu Miura</b>                                                       | <b>1245</b> |
| Genomic organization, chromosomal localization, and alternative splicing of the human phosphodiesterase 8B gene                                                                 | <b>Masaaki Hayashi, Yasuhito Shimada, Yuhei Nishimura, Takaaki Hama, and Toshio Tanaka</b>                                  | <b>1253</b> |
| Effects of leptin, troglitazone, and dietary fat on stearoyl CoA desaturase                                                                                                     | <b>Tetsuya Kakuma, Young Lee, and Roger H. Unger</b>                                                                        | <b>1259</b> |
| Phosphatase inhibition leads to activation of I $\kappa$ B kinase in murine macrophages                                                                                         | <b>Bruce J. Grossman, Thomas P. Shanley, Alvin G. Denenberg, Bin Zhao, and Hector R. Wong</b>                               | <b>1264</b> |
| Vascular endothelial growth factor is expressed in endothelial cells isolated from skeletal muscles of nitric oxide synthase knockout mice during prazosin-induced angiogenesis | <b>Luis Da Silva-Azevedo, Oliver Baum, Andreas Zakrzewicz, and Axel R. Pries</b>                                            | <b>1270</b> |

|                                                                                                                                                                   |                                                                                                                                                                              |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| TAK1-TAB1 fusion protein: a novel constitutively active mitogen-activated protein kinase kinase kinase that stimulates AP-1 and NF- $\kappa$ B signaling pathways | Hiroaki Sakurai, Akito Nishi, Naoya Sato, Junko Mizukami, Hidetaka Miyoshi, and Takahisa Sugita                                                                              | 1277 |
| Cloning and characterization of the highly expressed <i>ETEA</i> gene from blood cells of atopic dermatitis patients                                              | Yukiho Imai, Akiko Nakada, Ryoichi Hashida, Yuji Sugita, Toshio Tanaka, Gozoh Tsujimoto, Kenji Matsumoto, Akira Akasawa, Hirohisa Saito, and Tadahilo Oshida                 | 1282 |
| Intracellular fatty acid downregulates <i>ob</i> gene expression in 3T3-L1 adipocytes                                                                             | Takeo Arai, Yasushi Kawakami, Teruhiko Matsushima, Yukichi Okuda, and Kamejiro Yamashita                                                                                     | 1291 |
| Enhancer elements in the mouse <i>Cypla2</i> gene for constitutive expression                                                                                     | Yo-ichi Uchida, Aiko Yano, Shin-ichi Kumakura, Tsutomu Sakuma, and Nobuo Nemoto                                                                                              | 1297 |
| Transcriptional activation of the human stress-inducible transcriptional repressor ATF3 gene promoter by p53                                                      | Chun Zhang, Choungfeng Gao, Junya Kawauchi, Yoshinori Hashimoto, Nobuo Tsuchida, and Shigetaka Kitajima                                                                      | 1302 |
| Effects of resveratrol on the G <sub>0</sub> -G <sub>1</sub> transition and cell cycle progression of mitogenically stimulated human lymphocytes                  | Tze-chen Hsieh, Dorota Halicka, Xiaohua Lu, Jan Kunicki, Junqiao Guo, Zbigniew Darzynkiewicz, and Joseph M. Wu                                                               | 1311 |
| Photobleaching of GFP-labeled H2AX in chromatin: H2AX has low diffusional mobility in the nucleus                                                                 | Joseph S. Siino, Igor B. Nazarov, Maria P. Svetlova, Lioudmila V. Solovjeva, Roger H. Adamson, Irina A. Zalenskaya, Peter M. Yau, E. Morton Bradbury, and Nikolai V. Tomilin | 1318 |
| Possible role of ILK-affixin complex in integrin-cytoskeleton linkage during platelet aggregation                                                                 | Satoshi Yamaji, Atsushi Suzuki, Heiwa Kanamori, Wataru Mishima, Maki Takabayashi, Katsumichi Fujimaki, Naoto Tomita, Shin Fujisawa, Shigeo Ohno, and Yoshiaki Ishigatsubo    | 1324 |
| Characterization of transgenic rats constitutively expressing vitamin D-24-hydroxylase gene                                                                       | Hisao Kasuga, Naobumi Hosogane, Kunio Matsuoka, Ikuo Mori, Yasufumi Sakura, Kozo Shimakawa, Toshimasa Shinki, Tatsuo Suda, and Shigehisa Taketomi                            | 1332 |
| Increased gene expression of endothelin-1 and vasoactive intestinal contractor/ endothelin-2 in the mammary gland of lactating mice                               | Takaharu Kozakai, Mitsue Sakate, Yoshinori Masuo, Tsuyoshi Uchide, and Kaname Saida                                                                                          | 1339 |
| Location of 2'-O-methyl nucleotides in 26S rRNA and methylation guide snoRNAs in <i>Caenorhabditis elegans</i>                                                    | Sayomi Higa, Noriko Maeda, Naoya Kenmochi, and Tatsuo Tanaka                                                                                                                 | 1344 |



|                                                                                                                                          |                                          |             |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|
| Inhibition of <i>Candida albicans</i> secreted aspartic protease by a novel series of peptidomimetics, also active on the HIV-1 protease | <b>Damiano Skrbec and Domenico Romeo</b> | <b>1350</b> |
| Author Index for Volume 297                                                                                                              |                                          | <b>1354</b> |

**Volume 298, Number 1, October 18, 2002**

**INTERVIEW**

|                                    |                 |   |
|------------------------------------|-----------------|---|
| A conversation with John E. Walker | K. Noelle Gracy | 1 |
|------------------------------------|-----------------|---|

**REGULAR ARTICLES**

|                                                                                                                                                                            |                                                                                                                                          |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|
| Presence of detergent-resistant microdomains in lysosomal membranes                                                                                                        | Antje Taute, Kristin Wätzig, Brigitte Simons, Christiane Lohaus, Helmut E. Meyer, and Andrej Hasilik                                     | 5  |
| A double-strand decoy DNA oligomer for NF- $\kappa$ B inhibits TNF $\alpha$ -induced ICAM-1 expression in sinusoidal endothelial cells                                     | Tomoyoshi Shibuya, Yoshiyuki Takei, Miyoko Hirose, Kenichi Ikejima, Nobuyuki Enomoto, Atsushi Maruyama, and Nobuhiro Sato                | 10 |
| Transcription factor TFIIF components enhance the GR coactivator activity but not the cell cycle-arresting activity of the human immunodeficiency virus type-1 protein Vpr | Tomoshige Kino, Makoto Tsukamoto, and George P. Chrousos                                                                                 | 17 |
| Improved conditions to induce hepatocytes from rat bone marrow cells in culture                                                                                            | Masahiro Miyazaki, Ichiro Akiyama, Masakiyo Sakaguchi, Emiko Nakashima, Mayumi Okada, Ken Kataoka, and Nam-ho Huh                        | 24 |
| Molecular cloning and functional expression of a <i>Drosophila</i> corazonin receptor                                                                                      | Giuseppe Cazzamali, Nicolaj P.E. Saxild, and Cornelis J.P. Grimmelikhuijzen                                                              | 31 |
| Limitations on the recombinant plasmid selection by Lac <sup>+</sup> /Lac <sup>-</sup> colony phenotype detection                                                          | Nadezhda I. Gutkina, Natalia V. Varlakhanova, Marina V. Lysova, and Sergei P. Kovalenko                                                  | 37 |
| Functional analysis of ABCA8, a new drug transporter                                                                                                                       | Shuichi Tsuruoka, Kenichi Ishibashi, Hisashi Yamamoto, Michi Wakaumi, Makoto Suzuki, George J. Schwartz, Masashi Imai, and Akio Fujimura | 41 |
| A novel plant defensin-like gene of winter wheat is specifically induced during cold acclimation                                                                           | Michiya Koike, Takashi Okamoto, Sakae Tsuda, and Ryozo Imai                                                                              | 46 |
| Endogenous receptor for melanin-concentrating hormone in human neuroblastoma Kelly cells                                                                                   | Sophie E. Schlumberger, Verena Jäggin, Heidi Tanner, and Alex N. Eberle                                                                  | 54 |
| Interaction of casein kinase II with ribosomal protein L22 of <i>Drosophila melanogaster</i>                                                                               | Wenfan Zhao, Ashok P. Bidwai, and Claiborne V.C. Glover                                                                                  | 60 |
| Expression of optineurin, a glaucoma-linked gene, is influenced by elevated intraocular pressure                                                                           | Jason L. Vittitow and Teresa Borrás                                                                                                      | 67 |

|                                                                                                                                                                                                                |                                                                                                                                                                                                               |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Binding of <i>Streptococcus mutans</i> to extracellular matrix molecules and fibrinogen                                                                                                                        | Anjum M. Beg, Micheala N. Jones, Tracey Miller-Torbert, and Robert G. Holt                                                                                                                                    | 75  |
| Hepatocyte growth factor triggers signaling cascades mediating vascular smooth muscle cell migration                                                                                                           | Taher E.I. Taher, Patrick W.B. Derksen, Onno J. de Boer, Marcel Spaargaren, Peter Teeling, Allard C. van der Wal, and Steven T. Pals                                                                          | 80  |
| Developmental expression of EphB6 in the thymus: lessons from EphB6 knockout mice                                                                                                                              | Manabu Shimoyama, Hiroshi Matsuoka, Aki Nagata, Nobuko Iwata, Akira Tamekane, Atsuo Okamura, Hiroshi Gomyo, Mitsuhiro Ito, Kou-ichi Jishage, Nobuo Kamada, Hiroshi Suzuki, Tetsuo Noda, and Toshimitsu Matsui | 87  |
| Mechanism for action of electromagnetic fields on cells                                                                                                                                                        | Dimitris J. Panagopoulos, Andreas Karabarbounis, and Lukas H. Margaritis                                                                                                                                      | 95  |
| <i>csmA</i> , a gene encoding a class V chitin synthase with a myosin motor-like domain of <i>Aspergillus nidulans</i> , is translated as a single polypeptide and regulated in response to osmotic conditions | Norio Takeshita, Akinori Ohta, and Hiroyuki Horiuchi                                                                                                                                                          | 103 |
| Trichostatin A—histone deacetylase inhibitor with clinical therapeutic potential—is also a selective and potent inhibitor of gelatinase A expression                                                           | Menachem Ailenberg and Mel Silverman                                                                                                                                                                          | 110 |
| Novel mutations in sarcomeric protein genes in dilated cardiomyopathy                                                                                                                                          | Steffen Daehmlow, Jeanette Erdmann, Tanja Kneuppel, Christoph Gille, Cornelius Froemmel, Manfred Hummel, Roland Hetzer, and Vera Regitz-Zagrosek                                                              | 116 |
| In vivo new bone formation by direct transfer of adenoviral-mediated bone morphogenetic protein-4 gene                                                                                                         | Yan Chen, Kenneth M.C. Cheung, Hsiang-fu Kung, John C.Y. Leong, William W. Lu, and Keith D.K. Luk                                                                                                             | 121 |
| 15-Deoxy-prostaglandin J <sub>2</sub> inhibits PDGF-A and -B chain expression in human vascular endothelial cells independent of PPAR $\gamma$                                                                 | Jifeng Zhang, Mingui Fu, Luning Zhao, and Yuqing E. Chen                                                                                                                                                      | 128 |
| Synchronization and phase-resetting by glutamate of an immortalized SCN cell line                                                                                                                              | William J. Hurst, Jennifer W. Mitchell, and Martha U. Gillette                                                                                                                                                | 133 |
| Reconstitution of telomerase activity utilizing human catalytic subunit expressed in insect cells                                                                                                              | Osamu Mikuni, James B. Trager, Heidi Ackerly, Scott L. Weinrich, Akira Asai, Yoshinori Yamashita, Tamio Mizukami, and Hideharu Anazawa                                                                        | 144 |
| Identification and characterization of heart-specific splicing of human neurexin 3 mRNA (NRXN3)                                                                                                                | Gianluca Occhi, Alessandra Rampazzo, Giorgia Beffagna, and Gian Antonio Danieli                                                                                                                               | 151 |



|                                                                                                              |                                                                                                                                                 |            |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| The <i>trans</i> -spliced variants of Sp1 mRNA in rat                                                        | <b>Terunao Takahara, Daisuke Kasahara,<br/>Daisuke Mori, Shuichi Yanagisawa,<br/>and Hiroshi Akanuma</b>                                        | <b>156</b> |
| Functional properties and $[Ca^{2+}]_i$ metabolism of creatine kinase—KO mice myocardium                     | <b>Andreas W. Bonz, Silke Kniesch,<br/>Ulrich Hofmann, Sina Küllmer, Lisa Bauer,<br/>Helga Wagner, Georg Ertl,<br/>and Matthias Spindler</b>    | <b>163</b> |
| Immunoscreening of phage-displayed cDNA-encoded polypeptides identifies B cell targets in autoimmune disease | <b>E. Helen Kemp, Laura M. Herd,<br/>Elizabeth A. Waterman,<br/>Anthony G. Wilson,<br/>Anthony P. Weetman, and Philip F. Watson</b>             | <b>169</b> |
| Hygrolidin induces p21 expression and abrogates cell cycle progression at G1 and S phases                    | <b>Manabu Kawada, Ihomi Usami,<br/>Shun-ichi Ohba, Tetsuya Someno,<br/>Jin Woo Kim, Yoichi Hayakawa,<br/>Kiyoshi Nose, and Masaaki Ishizuka</b> | <b>178</b> |

**Number 2, October 25, 2002**

|                                                                                                                                                                                                                                  |                                                                                                                                                                                                                     |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| High-affinity Src-SH2 ligands which do not activate Tyr <sup>527</sup> -phosphorylated Src in an experimental in vivo system                                                                                                     | <b>Eliane Mandine, Véronique Jean-Baptiste,<br/>Béatrice Vayssière, Dominique Gofflo,<br/>Didier Bénard, Edoardo Sarubbi,<br/>Pierre Deprez, Roland Baron,<br/>Giulio Superti-Furga,<br/>and Dominique Lesuisse</b> | <b>185</b> |
| The hormonogenic tyrosine 5 of porcine thyroglobulin is sulfated                                                                                                                                                                 | <b>Nicole Venot, Marie-Christine Nlend,<br/>David Cauvi, and Odile Chabaud</b>                                                                                                                                      | <b>193</b> |
| Functional CLOCK is not involved in the entrainment of peripheral clocks to the restricted feeding: entrainable expression of <i>mPer2</i> and <i>BMAL1</i> mRNAs in the heart of <i>Clock</i> mutant mice on Jcl:ICR background | <b>Katsutaka Oishi, Koyomi Miyazaki,<br/>and Norio Ishida</b>                                                                                                                                                       | <b>198</b> |
| Effects of deleting a tripeptide sequence observed in muscular dystrophy patients on the conformation of synthetic peptides corresponding to the scaffolding domain of caveolin-3                                                | <b>M.V. Jagannadham, A. Sharadadevi,<br/>and R. Nagaraj</b>                                                                                                                                                         | <b>203</b> |
| The Na <sup>+</sup> /H <sup>+</sup> exchanger regulatory factor 2 mediates phosphorylation of serum- and glucocorticoid-induced protein kinase 1 by 3-phosphoinositide-dependent protein kinase 1                                | <b>Jaesun Chun, Taegun Kwon, Eunjung Lee,<br/>Pann-Ghill Suh, Eui-Ju Choi,<br/>and Sang Sun Kang</b>                                                                                                                | <b>207</b> |
| Chaperonin GroESL mediates the protein folding of human liver mitochondrial aldehyde dehydrogenase in <i>Escherichia coli</i>                                                                                                    | <b>Ki-Hwan Lee, Ho-Seung Kim,<br/>Han-Seung Jeong, and Yong-Sung Lee</b>                                                                                                                                            | <b>216</b> |

|                                                                                                                                             |                                                                                                                                                                                                                                       |     |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Active human ferritin H/L-hybrid and sequence effect on folding efficiency in <i>Escherichia coli</i>                                       | Jeewon Lee, Sung-Woo Kim,<br>Yang-Hoon Kim, and Ji-Young Ahn                                                                                                                                                                          | 225 |
| Pyrrolidine dithiocarbamate induces cyclooxygenase-2 expression in NIH 3T3 fibroblast cells                                                 | Jeong Eun Lee, Kyung Min Kim,<br>Jae-We Cho, Seong-II Suh, Min-Ho Suh,<br>Taeg Kyu Kwon, Jong-Wook Park,<br>Jae Hoon Bae, Dae-Kyu Song,<br>Chi-Heum Cho, Insoo Bae,<br>and Won-Ki Baek                                                | 230 |
| Translational initiation regulators are hypophosphorylated in rat liver during ethionine-mediated ATP depletion                             | Fumiaki Yoshizawa, Emi Watanabe,<br>Kunio Sugahara, and Yasuo Natori                                                                                                                                                                  | 235 |
| Histamine stimulates production of osteoclast differentiation factor/receptor activator of nuclear factor- $\kappa$ B ligand by osteoblasts | Yoshiaki Deyama, Takashi Kikuri,<br>Gen-ichi Ohnishi, Yi-Gang Feng,<br>Sadaaki Takeyama, Mitsutoki Hatta,<br>Yoshitaka Yoshimura, and Kuniaki Suzuki                                                                                  | 240 |
| Sugars have potential to curtail oxygenase activity of Rubisco                                                                              | P. Sivakumar, P. Sharmila, Vikas Jain,<br>and P. Pardha Saradhi                                                                                                                                                                       | 247 |
| IL-1 $\beta$ induces MMP-9 via reactive oxygen species and NF- $\kappa$ B in murine macrophage RAW 264.7 cells                              | Hyeon G. Yoo, Boo. A. Shin,<br>Jung S. Park, Kee H. Lee, Kee O. Chay,<br>Sung Y. Yang, Bong W. Ahn,<br>and Young D. Jung                                                                                                              | 251 |
| Synthesis and incorporation of [6,7]-selenatryptophan into dihydrofolate reductase                                                          | Jeffrey O. Boles, James Henderson,<br>Duane Hatch, and Louis A. "Pete" Silks                                                                                                                                                          | 257 |
| Reciprocal actions of NCAM and tPA via a Ras-dependent MAPK activation in rat hippocampal neurons                                           | Hyeon Son, Jin Seuk Kim, Jung Mogg Kim,<br>Sang-Hun Lee, and Yong-Sung Lee                                                                                                                                                            | 262 |
| Characterization of <i>Vibrio mimicus</i> phospholipase A (PhlA) and cytotoxicity on fish cell                                              | Jong-Hee Lee, Sun-Hee Ahn, Sun-Hoi Kim,<br>Yoon-Hyeok Choi, Kee-Jai Park,<br>and In-Soo Kong                                                                                                                                          | 269 |
| Constitutive overexpression of immunoidentical forms of PCP-induced <i>Euglena gracilis</i> CYP-450                                         | Jean-Philippe Barque,<br>Abdelouahab Abahamid,<br>Jean-Pierre Flinois, Philippe Beaune,<br>and Jacqueline Bonaly                                                                                                                      | 277 |
| Bcl-2 can promote p53-dependent senescence versus apoptosis without affecting the G1/S transition                                           | Vincent Rincheval, Flore Renaud,<br>Christophe Lemaire, Nelly Godefroy,<br>Pascale Trotot, Viviane Boulo,<br>Bernard Mignotte,<br>and Jean-Luc Vayssi re                                                                              | 282 |
| The enhanced IL-18 production by UVB irradiation requires ROI and AP-1 signaling in human keratinocyte cell line (HaCaT)                    | Daeho Cho, Jae Seung Kang,<br>Jong Hoon Park, Young-In Kim,<br>Eunsil Hahm, Junechul Lee, Yoolhee Yang,<br>Junho Jeon, Hyunkeun Song,<br>Hyunjeong Park, Taesung Kim, Saic Pang,<br>Chul-Woo Kim, Young Il Hwang,<br>and Wang Jae Lee | 289 |

**Number 3, November 1, 2002**

|                                                                                                                                                                                          |                                                                                                                    |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------|
| Impaired natural killer (NK) cell activity in leptin receptor deficient mice: leptin as a critical regulator in NK cell development and activation                                       | <b>Zhigang Tian, Rui Sun, Haiming Wei, and Bin Gao</b>                                                             | <b>297</b> |
| GRK3 regulation during CRF- and urocortin-induced CRF <sub>1</sub> receptor desensitization                                                                                              | <b>Frank M. Dautzenberg, Sandra Wille, Sandra Braun, and Richard L. Hauger</b>                                     | <b>303</b> |
| Dissociation of AMPK activity and ACC $\beta$ phosphorylation in human muscle during prolonged exercise                                                                                  | <b>Jørgen F.P. Wojtaszewski, Marina Mourtzakis, Thore Hillig, Bengt Saltin, and Henriette Pilegaard</b>            | <b>309</b> |
| Concerted elevation of acyl-coenzyme A: diacylglycerol acyltransferase (DGAT) activity through independent stimulation of mRNA expression of DGAT1 and DGAT2 by carbohydrate and insulin | <b>Rupalie L. Meegalla, Jeffrey T. Billheimer, and Dong Cheng</b>                                                  | <b>317</b> |
| Effects of targeted overexpression of pleiotrophin on postnatal bone development                                                                                                         | <b>Rahul S. Tare, Richard O.C. Oreffo, Kenzo Sato, Heikki Rauvala, Nicholas M.P. Clarke, and Helmtrud I. Roach</b> | <b>324</b> |
| Distribution of neurons containing leptin receptors in the hypothalamus of the pig                                                                                                       | <b>K. Czaja, M. Łakomy, W. Sienkiewicz, J. Kaleczyc, Z. Pidsudko, C.R. Barb, G.B. Rampacek, and R.R. Kraeling</b>  | <b>333</b> |
| Resistance to mitochondrial- and Fas-mediated apoptosis in human leukemic cells with acquired resistance to 9- $\beta$ -D-arabinofuranosylguanosine                                      | <b>Emma Månsson, Helene Stridh, and Freidoune Albertioni</b>                                                       | <b>338</b> |
| Effect of metformin on adipose tissue resistin expression in <i>db/db</i> mice                                                                                                           | <b>Hiroki Fujita, Hiromi Fujishima, Tsukasa Morii, Jun Koshimura, Takuma Narita, Masafumi Takei, and Seiki Ito</b> | <b>345</b> |
| Reproducibility of targeted gene expression measurements in human islets of Langerhans                                                                                                   | <b>Richard Barry, Mohammad Tadayyon, and Irene C. Green</b>                                                        | <b>350</b> |
| Intercellular trafficking of herpes simplex virus type 2 UL14 deletion mutant proteins                                                                                                   | <b>Yohei Yamauchi, Fumi Goshima, Tetsushi Yoshikawa, Naoki Nozawa, Tetsuo Koshizuka, and Yukihiro Nishiyama</b>    | <b>357</b> |
| Regulation of <i>Xenopus</i> embryonic cell adhesion by the small GTPase, rac                                                                                                            | <b>Mark D. Hens, Ivana Nikolic, and Caron M. Woolcock</b>                                                          | <b>364</b> |



|                                                                                                                                                  |                                                                                                                                          |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Molecular characterization and expression of an alternate proliferating cell nuclear antigen homologue, PpPCNA2, in <i>Plasmodium falciparum</i> | Shelley Patterson, Christina Whittle, Claudia Robert, and Debopam Chakrabarti                                                            | 371 |
| Reduced cyclin D1 ubiquitination in UVB-induced murine squamous cell carcinomas                                                                  | Arianna L. Kim, Jean Gautier, David R. Bickers, and Mohammad Athar                                                                       | 377 |
| Expression, purification, and characterization of subunit E, an essential subunit of the vacuolar ATPase                                         | Gerhard Grüber, Jasminka Godovac-Zimmermann, Thomas A. Link, Ünal Coskun, Vincenzo F. Rizzo, Christian Betz, and Susanne M. Bailer       | 383 |
| Eotaxin induces migration of RBL-2H3 mast cells via a Rac-ERK-dependent pathway                                                                  | Chang-Hoon Woo, Dong Tak Jeong, Seog-Beom Yoon, Key-Sun Kim, Il Yup Chung, Toshihiko Saeki, and Jae-Hong Kim                             | 392 |
| Possible coupling of prostaglandin E receptor EP <sub>1</sub> to TRP5 expressed in <i>Xenopus laevis</i> oocytes                                 | Hiroyuki Tabata, Satoshi Tanaka, Yukihiro Sugimoto, Hideaki Kanki, Shuji Kaneko, and Atsushi Ichikawa                                    | 398 |
| Structural requirements for species-specific induction of the sperm acrosome reaction by sea urchin egg sulfated fucan                           | Noritaka Hirohashi, Ana-Cristina E.S. Vilela-Silva, Paulo A.S. Mourão, and Victor D. Vacquier                                            | 403 |
| Identification of the LIM kinase-1 as a ceramide-regulated gene in renal mesangial cells                                                         | Soheyla Shabahang, Andrea Huwiler, and Josef Pfeilschifter                                                                               | 408 |
| A specific binding protein/receptor for 1 $\alpha$ ,25-dihydroxyvitamin D <sub>3</sub> is present in an intestinal caveolae membrane fraction    | Anthony W. Norman, Christopher J. Olivera, Fátima R. Mena Barreto Silva, and June E. Bishop                                              | 414 |
| Differential regulation between gene expression and histone H3 acetylation in the variable regions of the TCR $\beta$ locus                      | Lili Wang, Makoto Senoo, and Sonoko Habu                                                                                                 | 420 |
| Adeno-associated viral gene transfer of dominant negative RhoA enhances erectile function in rats                                                | Kanchan Chitaley, Trinity J. Bivalacqua, Hunter C. Champion, Mustafa F. Usta, Wayne J.G. Hellstrom, Thomas M. Mills, and R. Clinton Webb | 427 |
| Identification of the novel splicing variants for the hPXR in human livers                                                                       | Shuichi Fukuen, Tsuyoshi Fukuda, Hideyasu Matsuda, Akihiko Sumida, Isamu Yamamoto, Tadanobu Inaba, and Junichi Azuma                     | 433 |
| Correlation between hydrophobic properties and efficiency of carrier-mediated membrane transduction and apoptosis of a p53 C-terminal peptide    | Yin Li, Ramon V. Rosal, Paul W. Brandt-Rauf, and Robert L. Fine                                                                          | 439 |

Molecular bases for human complement C7 polymorphisms, C7\*3 and C7\*4

**Takahiko Horiuchi, Hiroaki Nishimukai, Tatsuyuki Okiura, Koji Nishimura, Hiroaki Nishizaka, Takeshi Kojima, Hiroshi Tsukamoto, Kenshi Hayashi, and Mine Harada** **450**

## ERRATUM

Volume **297**, Number 3 (2002), in the article "Dimerization of morphine and orphanin FQ/nociceptin receptors: generation of a novel opioid receptor subtype" by Ying-Xian Pan, Elizabeth Bolan, and Gavril W. Pasternak, pages 659–663 (doi:10.1016/S0006-219X(02)02258-1) **456**

## Number 4, November 8, 2002

### BREAKTHROUGHS AND VIEWS

Phytochrome-mediated signal transduction pathways in plants

**Jeong-Il Kim, Gennady V. Kozhukh, and Pill-Soon Song** **457**

### REGULAR ARTICLES

Attenuated signaling associated with immune activation in HIV-1-infected individuals

**Qibin Leng, Gadi Borkow, and Zvi Bentwich** **464**

Oxidation products of phospholipid-containing  $\delta$ -9 fatty acids specifically impair the activity of tissue factor pathway inhibitor

**Sayuri Hiraishi, Shuichi Horie, and Yoshiyuki Seyama** **468**

Elevated phospholipase D activity induces apoptosis in normal rat fibroblasts

**Minghao Zhong, Troy Joseph, Desmond Jackson, Sergey Beychenok, and David A. Foster** **474**

Binding symmetry of extracellular divalent cations to conduction pore studied using tandem dimers of a CNG channel

**Ryuk-Jun Kwon, Tal Soo Ha, Wonjae Kim, and Chul-Seung Park** **478**

In vitro selection of specific RNA inhibitors of NFATc

**Soo-Jin Bae, Ji-Hyun Oum, Surendra Sharma, Jungchan Park, and Seong-Wook Lee** **486**

Dual effects of the homeobox transcription factor Csx/Nkx2–5 on cardiomyocytes

**Koshiro Monzen, Weidong Zhu, Hiroki Kasai, Yukio Hiroi, Toru Hosoda, Hiroshi Akazawa, Yunzeng Zou, Doubun Hayashi, Tsutomu Yamazaki, Ryoza Nagai, and Issei Komuro** **493**

Identification of an alternatively spliced isoform of the fyn tyrosine kinase

**Jeffrey F. Goldsmith, Craig G. Hall, and T. Prescott Atkinson** **501**

|                                                                                                                                                                        |                                                                                                                                                                           |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Electroporation in combination with a plasmid vector containing SV40 enhancer elements results in increased and persistent gene expression in mouse muscle             | <b>Pontus Blomberg, Malihe Eskandarpour, Song Xia, Christer Sylvén, and Khalid B. Islam</b>                                                                               | <b>505</b> |
| Novel interaction of cortactin with endothelial cell myosin light chain kinase                                                                                         | <b>Steven M. Dudek, Konstantin G. Birukov, Xi Zhan, and Joe G.N. Garcia</b>                                                                                               | <b>511</b> |
| Release of regulators of angiogenesis following Hypocrellin-A and -B photodynamic therapy of human brain tumor cells                                                   | <b>Martin H. Deininger, Toni Weinschenk, Matthias H. Morgalla, Richard Meyermann, and Hermann J. Schluesener</b>                                                          | <b>520</b> |
| pCLCA1 becomes a cAMP-dependent chloride conductance mediator in Caco-2 cells                                                                                          | <b>Matthew E. Loewen, Lane K. Bekar, Sherif E. Gabriel, Wolfgang Walz, and George W. Forsyth</b>                                                                          | <b>531</b> |
| Effects of cisplatin on expression of DNA ligases in MiaPaCa human pancreatic cancer cells                                                                             | <b>Daekyu Sun, Rheanna Urrabaz, Christoph Buzello, and Myhanh Nguyen</b>                                                                                                  | <b>537</b> |
| Identification and characterization of two novel low-molecular-weight dual specificity phosphatases                                                                    | <b>Kristin L. Hood, James F. Tobin, and Christina Yoon</b>                                                                                                                | <b>545</b> |
| The in vitro and in vivo protective activity of monoclonal antibodies directed against Hantaan virus: potential application for immunotherapy and passive immunization | <b>Zhikai Xu, Lixin Wei, Liya Wang, Haitao Wang, and Shibo Jiang</b>                                                                                                      | <b>552</b> |
| Cell surface expression of a GPI-anchored form of mouse acetylcholinesterase in <i>Klpmr1Δ</i> cells of <i>Kluyveromyces lactis</i>                                    | <b>Daniela Uccelletti, Antonella De Jaco, Francesca Farina, Patrizia Mancini, Gabriella Augusti-Tocco, Stefano Biagioni, and Claudio Palleschi</b>                        | <b>559</b> |
| Functional improvement of antibody fragments using a novel phage coat protein III fusion system                                                                        | <b>Kim Bak Jensen, Martin Larsen, Jesper Søndergaard Pedersen, Peter Astrup Christensen, Luis Álvarez-Vallina, Steffen Goletz, Brian F.C. Clark, and Peter Kristensen</b> | <b>566</b> |
| Ionic interaction of the HIV-1 V3 domain with CCR5 and deregulation of T lymphocyte function                                                                           | <b>Stavroula Baritaki, Alexis Zafiropoulos, Maria Sioumpara, Manolis Politis, Demetrios A. Spandidos, and Elias Krambovitis</b>                                           | <b>574</b> |
| Diverse eukaryotic transcripts suggest short tandem repeats have cellular functions                                                                                    | <b>Donald E. Riley and John N. Krieger</b>                                                                                                                                | <b>581</b> |
| In vitro transfer of antisense oligodeoxynucleotides into coronary endothelial cells by ultrasound                                                                     | <b>Shin-ichiro Miura, Katsuro Tachibana, Takahiro Okamoto, and Keiji Saku</b>                                                                                             | <b>587</b> |
| Visualization of intracellular trafficking of exogenous DNA delivered by cationic liposomes                                                                            | <b>Hiroyuki Kamiya, Yuka Fujimura, Ichiro Matsuoka, and Hideyoshi Harashima</b>                                                                                           | <b>591</b> |



|                                                                                                            |                                                                                                                         |            |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------|
| The domain-swapped dimer of cyanovirin-N contains two sets of oligosaccharide binding sites in solution    | <b>Laura G. Barrientos<br/>and Angela M. Gronenborn</b>                                                                 | <b>598</b> |
| <i>Ganoderma lucidum</i> suppresses motility of highly invasive breast and prostate cancer cells           | <b>Daniel Sliva, Carlos Labarrere,<br/>Veronika Slivova, Miroslav Sedlak,<br/>Frank P. Lloyd Jr., and Nancy W.Y. Ho</b> | <b>603</b> |
| Cloning and localization of <i>rgpr85</i> encoding rat G-protein-coupled receptor                          | <b>Jongrye Jeon, Changmee Kim, Woong Sun,<br/>Hyesun Chung, Sun-Hwa Park,<br/>and Hyun Kim</b>                          | <b>613</b> |
| Calmodulin-dependent regulation of hypotonicity-induced translocation of ENaC in renal epithelial A6 cells | <b>Shinsaku Tokuda, Naomi Niisato,<br/>Shinsuke Morisaki,<br/>and Yoshinori Marunaka</b>                                | <b>619</b> |

**Number 5, November 15, 2002**

|                                                                                                                                            |                                                                                                                                                                                                                |            |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Surface plasmon resonance for measuring TBP-promoter interaction                                                                           | <b>Everly Conway de Macario,<br/>Ulrich H. Rudofsky,<br/>and Alberto J.L. Macario</b>                                                                                                                          | <b>625</b> |
| Thermostable aldehyde dehydrogenase from psychrophile, <i>Cytophaga</i> sp. KUC-1: enzymological characteristics and functional properties | <b>Yuko Yamanaka, Takayuki Kazuoka,<br/>Masahiro Yoshida, Kazuya Yamanaka,<br/>Tadao Oikawa, and Kenji Soda</b>                                                                                                | <b>632</b> |
| Molecular cloning and expression of a functional dermonecrotic and haemolytic factor from <i>Loxosceles laeta</i> venom                    | <b>Matheus de F. Fernandes Pedrosa,<br/>Inácio de L.M. Junqueira de Azevedo,<br/>Rute M. Gonçalves-de-Andrade,<br/>Carmen W. van den Berg,<br/>Celso R.R. Ramos, Paulo Lee Ho,<br/>and Denise V. Tambourgi</b> | <b>638</b> |
| 4-Methylumbelliferone induces the expression of membrane type 1-matrix metalloproteinase in cultured human skin fibroblasts                | <b>Toshiya Nakamura, Takashi Ishikawa,<br/>Naoki Nanashima, Tomisato Miura,<br/>Hiroyuki Nozaka, Rie Nakaoka,<br/>and Tatsusuke Sato</b>                                                                       | <b>646</b> |
| Functional studies of human skin disease- and deafness-associated connexin 30 mutations                                                    | <b>John E.A. Common, David Becker,<br/>Wei-Li Di, Irene M. Leigh,<br/>Edel A. O'Toole, and David P. Kelsell</b>                                                                                                | <b>651</b> |
| Gene expression of the tight junction protein occludin includes differential splicing and alternative promoter usage                       | <b>Joachim Mankertz, Jörg Stefan Waller,<br/>Bernd Hillenbrand, Shida Tavalali,<br/>Peter Florian, Torsten Schöneberg,<br/>Michael Fromm,<br/>and Jörg Dieter Schulzke</b>                                     | <b>657</b> |
| Docosahexaenoic acid suppresses the activity of peroxisome proliferator-activated receptors in a colon tumor cell line                     | <b>Joo Y. Lee and Daniel H. Hwang</b>                                                                                                                                                                          | <b>667</b> |

|                                                                                                                             |                                                                                                                                                                          |            |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Gene expression profile analysis of the mouse liver during bacteria-induced fulminant hepatitis by a cDNA microarray system | <b>Hongyan Dong, Nobuaki Toyoda, Hiroyuki Yoneyama, Makoto Kurachi, Tadashi Kasahara, Yoshiro Kobayashi, Hidekuni Inadera, Shin-ichi Hashimoto, and Kouji Matsushima</b> | <b>675</b> |
| Modulation of CYP3A4 expression by ceramide in human colon carcinoma HT-29 cells                                            | <b>Young-Jin Chun, Sunghye Lee, Soon Ae Yang, Sungsik Park, and Mie Young Kim</b>                                                                                        | <b>687</b> |
| Cleavage of the cyclin-dependent kinase 5 activator p35 to p25 does not induce tau hyperphosphorylation                     | <b>Petri Kerokoski, Tiina Suuronen, Antero Salminen, Hilkka Soininen, and Tuula Pirttilä</b>                                                                             | <b>693</b> |
| Carnosine is a quencher of 4-hydroxy-nonenal: through what mechanism of reaction?                                           | <b>Giancarlo Aldini, Marina Carini, Giangiacomo Beretta, Silvia Bradamante, and Roberto Maffei Facino</b>                                                                | <b>699</b> |
| An approach for reducing unwanted oligomerisation of DsRed fusion proteins                                                  | <b>Paul Gavin, Rodney J. Devenish, and Mark Prescott</b>                                                                                                                 | <b>707</b> |
| Identification of membrane-type receptor for bile acids (M-BAR)                                                             | <b>Takaharu Maruyama, Yasuhisa Miyamoto, Takao Nakamura, Yoshitaka Tamai, Hiromasa Okada, Eiji Sugiyama, Tatsuji Nakamura, Hiraku Itadani, and Kenichi Tanaka</b>        | <b>714</b> |
| The $\beta$ 2-adaptin clathrin adaptor interacts with the mitotic checkpoint kinase BubR1                                   | <b>Corinne Cayrol, Céline Cougoule, and Michel Wright</b>                                                                                                                | <b>720</b> |
| Analysis of human TIE2 function on hematopoietic stem cells in umbilical cord blood                                         | <b>Hiromi Yuasa, Nobuyuki Takakura, Taizou Shimomura, Souichi Suenobu, Taketo Yamada, Hitomi Nagayama, Yuichi Oike, and Toshio Suda</b>                                  | <b>731</b> |
| Subtype- and species-specific knockdown of PKC using short interfering RNA                                                  | <b>Naoki Irie, Norio Sakai, Takehiko Ueyama, Taketoshi Kajimoto, Yasuhito Shirai, and Naoaki Saito</b>                                                                   | <b>738</b> |
| Direct evidence for membrane pore formation by the apoptotic protein Bax                                                    | <b>Raquel F. Epand, Jean-Claude Martinou, Sylvie Montessuit, Richard M. Epand, and Christopher M. Yip</b>                                                                | <b>744</b> |
| High-throughput measurement of mitochondrial membrane potential in a neural cell line using a fluorescence plate reader     | <b>Alice Wong and Gino A. Cortopassi</b>                                                                                                                                 | <b>750</b> |
| Function of the lectin domain of polypeptide <i>N</i> -acetylgalactosaminyltransferase 1                                    | <b>Mari Tenno, Ferenc J. Kézdy, Åke P. Elhammer, and Akira Kurosaka</b>                                                                                                  | <b>755</b> |
| Shedding of the luminal domain of the neurotensin receptor-3/sortilin in the HT29 cell line                                 | <b>Valérie Navarro, Jean-Pierre Vincent, and Jean Mazella</b>                                                                                                            | <b>760</b> |
| Activation of p38 MAPK induces cell cycle arrest via inhibition of Raf/ERK pathway during muscle differentiation            | <b>Jinhwa Lee, Feng Hong, Sijoong Kwon, Sam Soo Kim, Dong Ok Kim, Heung Sun Kang, Su Jae Lee, Joohun Ha, and Sung Soo Kim</b>                                            | <b>765</b> |

|                                                                                                                                                               |                                                                                                                                                                                                                                                  |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Oligonucleotide microarray data mining:<br>search for age-dependent gene expression                                                                           | Marc Kirschner, Gemma Pujol,<br>and Aurelian Radu                                                                                                                                                                                                | 772 |
| Enhanced secretion of glucagon-like peptide 1<br>by biguanide compounds                                                                                       | Nobuyuki Yasuda, Takashi Inoue,<br>Tadashi Nagakura, Kazuto Yamazaki,<br>Kazunobu Kira, Takao Saeki,<br>and Isao Tanaka                                                                                                                          | 779 |
| A transient surge of ghrelin secretion before<br>feeding is modified by different feeding<br>regimens in sheep                                                | Toshihisa Sugino, Junji Yamaura,<br>Masako Yamagishi, Atsushi Ogura,<br>Reiko Hayashi, Youhei Kurose,<br>Masayasu Kojima, Kenji Kangawa,<br>Yoshihisa Hasegawa,<br>and Yoshiaki Terashima                                                        | 785 |
| Molecular cloning of a splicing variant of<br>human RECQL helicase                                                                                            | Ai Hua Zhang and XuGuang Xi                                                                                                                                                                                                                      | 789 |
| Expression of V-1, a novel catecholamine<br>biosynthesis regulatory protein, is enhanced<br>by hypertension in atrial myocytes of Dahl<br>salt-sensitive rats | Tohru Yamakuni, Michio Hashimoto,<br>Hiroyuki Sakagami, Toshifumi Yamamoto,<br>Masumi Kobayashi, Yoshimi Fujii,<br>Hideko Yamamoto, Dileep Kumar Rohra,<br>Yusuke Hiwatashi, Takao Honma,<br>Hisatake Kondo, Osamu Shido,<br>and Yasushi Ohizumi | 793 |
| Different isoforms of the soluble leptin<br>receptor in non-pregnant and pregnant mice                                                                        | A. Lammert, G. Brockmann, U. Renne,<br>W. Kiess, A. Böttner, J. Thiery,<br>and J. Kratzsch                                                                                                                                                       | 798 |
| Recombinant adenovirus encoding H-ras<br>ribozyme induces apoptosis in laryngeal<br>cancer cells through caspase- and<br>mitochondria-dependent pathways      | Chih-Hung Wang, Li-Jen Tsai,<br>Yeou-Ping Tsao, Jer-Tsong Hsieh,<br>Wei-Wen Chien, Ching-Len Liao,<br>Hsing-Won Wang, Hsiao-Sheng Liu,<br>and Show-Li Chen                                                                                       | 805 |
| Transcriptional regulation of Xbr-1a/Xvent-2<br>homeobox gene: analysis of its promoter region                                                                | Hyun-Shik Lee, Mae Ja Park,<br>Sung-Young Lee, Yoo-Seok Hwang,<br>Hyosang Lee, Dong-Hyun Roh,<br>Jong-Il Kim, Jae-Bong Park, Jae-Yong Lee,<br>Hsiang-fu Kung, and Jaebong Kim                                                                    | 815 |
| Efficient adenylyl cyclase activation by a<br>$\beta_2$ -adrenoceptor- $G_i\alpha_2$ fusion protein                                                           | Roland Seifert, Katharina Wenzel-Seifert,<br>John M. Arthur, Powell O. Jose,<br>and Brian K. Kobilka                                                                                                                                             | 824 |
| Author Index for Volume 298                                                                                                                                   |                                                                                                                                                                                                                                                  | 829 |



**Volume 299, Number 1, November 22, 2002**

|                                                                                                                                                                                         |                                                                                                                                                                                             |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| DSCAM: an endogenous promoter drives expression in the developing CNS and neural crest                                                                                                  | Gillian M. Barlow, Gary E. Lyons, James A. Richardson, Harvey B. Sarnat, and Julie R. Korenberg                                                                                             | 1  |
| A fast fiber enhancer exists in the muscle regulatory factor 4 gene promoter                                                                                                            | Christopher L. Pin and Stephen F. Konieczny                                                                                                                                                 | 7  |
| Recombinant adenoviral expression of dominant negative IkB $\alpha$ protects brain from cerebral ischemic injury                                                                        | Lin Xu, Yutian Zhan, Yibin Wang, Giora Z. Feuerstein, and Xinkang Wang                                                                                                                      | 14 |
| ST2 protein induced by inflammatory stimuli can modulate acute lung inflammation                                                                                                        | Katsuhisa Oshikawa, Ken Yanagisawa, Shin-ichi Tominaga, and Yukihiro Sugiyama                                                                                                               | 18 |
| Linkage between the <i>CYP2C8</i> and <i>CYP2C9</i> genetic polymorphisms                                                                                                               | Umit Yasar, Stefan Lundgren, Erik Eliasson, Anna Bennet, Björn Wiman, Ulf de Faire, and Anders Rane                                                                                         | 25 |
| Interleukin-10 expression after intramuscular DNA electrotransfer: kinetic studies                                                                                                      | Virginie Deleuze, Daniel Scherman, and Michel F. Bureau                                                                                                                                     | 29 |
| Serpins are apically secreted from MDCK cells independently of their raft association                                                                                                   | Jakob E. Larsen, Hans Sjöström, Ove Norén, and Lotte K. Vogel                                                                                                                               | 35 |
| Determination of the secondary structure in solution of the <i>Escherichia coli</i> DnaA DNA-binding domain                                                                             | Takayuki Obita, Takafumi Iwura, Masayuki Su'etsugu, Yoichiro Yoshida, Yoshitsugu Tanaka, Tsutomu Katayama, Tadashi Ueda, and Taiji Imoto                                                    | 42 |
| Human brain acyl-CoA hydrolase isoforms encoded by a single gene                                                                                                                        | Junji Yamada, Yu Kuramochi, Mitsuhiro Takagi, Takafumi Watanabe, and Tetsuya Suga                                                                                                           | 49 |
| Non-AUG translation initiation of mRNA encoding plastid-targeted phage-type RNA polymerase in <i>Nicotiana sylvestris</i>                                                               | Yuki Kobayashi, Yuko Dokiya, Yoshinori Kumazawa, and Mamoru Sugita                                                                                                                          | 57 |
| The focal adhesion kinase amino-terminal domain localises to nuclei and intercellular junctions in HEK 293 and MDCK cells independently of tyrosine 397 and the carboxy-terminal domain | Alasdair Stewart, Claire Ham, and Ian Zachary                                                                                                                                               | 62 |
| EST analysis of mRNAs expressed in neurula of Chinese amphioxus                                                                                                                         | Chun-yan Mou, Shi-cui Zhang, Jiang-hai Lin, Wen-li Yang, Wen-yan Wu, Jian-wen Wei, Xiao-kun Wu, Jing-chun Du, Zhi-yan Fu, Lan-ting Ye, Yang Lu, Xiao-jin Xie, Yi-liang Wang, and An-long Xu | 74 |

|                                                                                                                                        |                                                                                                                                                                |            |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Cell membrane translocation of the N-terminal (1–28) part of the prion protein                                                         | <b>P. Lundberg, M. Magzoub, M. Lindberg, M. Hällbrink, J. Jarvet, L.E.G. Eriksson, Ü. Langel, and A. Gräslund</b>                                              | <b>85</b>  |
| LOX-1 expressed in cultured rat chondrocytes mediates oxidized LDL-induced cell death—possible role of dephosphorylation of Akt        | <b>Takefumi Nakagawa, Tadashi Yasuda, Hajime Hoshikawa, Makoto Shimizu, Takumi Kakinuma, Mingyi Chen, Tomoh Masaki, Takashi Nakamura, and Tatsuya Sawamura</b> | <b>91</b>  |
| Sorting of an exocrine secretory protein to the regulated secretory pathway in endocrine cells                                         | <b>Darrin J. Cowley, Maylene Chu, and Sven-Ulrik Gorr</b>                                                                                                      | <b>98</b>  |
| Serum deprivation increases the expression of low density lipoprotein receptor-related protein in primary cultured rat astrocytes      | <b>Inho Jo, Hyung-Min Im, Hyun-Ju Shin, Kae Won Cho, Miyoung Jung, Sun-Don Kim, Jeongmi Kim Jeong, and Sangmee Ahn Jo</b>                                      | <b>102</b> |
| Enhanced expression of the human chitinase 3-like 2 gene (YKL-39) but not chitinase 3-like 1 gene (YKL-40) in osteoarthritic cartilage | <b>Eric Steck, Stephen Breit, Steffen J. Breusch, Matthias Axt, and Wiltrud Richter</b>                                                                        | <b>109</b> |
| Functional regulation of TEL by p38-induced phosphorylation                                                                            | <b>Honoka Arai, Kazuhiro Maki, Kazuo Waga, Ko Sasaki, Yuichi Nakamura, Yoichi Imai, Mineo Kurokawa, Hisamaru Hirai, and Kinuko Mitani</b>                      | <b>116</b> |
| Analysis of bilateral inverse symmetry in whole bacterial chromosomes                                                                  | <b>J. Sánchez and M.V. José</b>                                                                                                                                | <b>126</b> |
| $\beta$ -Adrenergic stimulation controls the expression of a thioesterase specific for very-long-chain fatty acids in perfused hearts  | <b>Isabel Neuman, Paula Maloberti, Constanza Lisdero, Cecilia Colonna, Jorge Peralta, Juan José Poderoso, and Ernesto J. Podestá</b>                           | <b>135</b> |
| Key amino acids for differential coupling of $\alpha$ 1-adrenergic receptor subtypes to Gs                                             | <b>Hitomi Shinoura, Katsushi Shibata, Akira Hirasawa, Akito Tanoue, Keitaro Hashimoto, and Gozoh Tsujimoto</b>                                                 | <b>142</b> |
| Hierarchical signaling thresholds determine the fates of naïve T cells: partial priming leads naïve T cells to unresponsiveness        | <b>Hiromichi Yamashiro, Yo Odani, Nobumichi Hozumi, and Naoko Nakano</b>                                                                                       | <b>148</b> |
| One-electron oxidation of “photo-Fenton” reagents and inhibition of lipid peroxidation                                                 | <b>Darren Tobin, Morfakis Arvanitidis, and Roger H. Bisby</b>                                                                                                  | <b>155</b> |
| Genomic structure and promoter analysis of the mouse neutral ceramidase gene                                                           | <b>Nozomu Okino, Kaoru Mori, and Makoto Ito</b>                                                                                                                | <b>160</b> |

## ERRATUM

|                                                                                                                                                                                                                                                                     |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Volume <b>297</b> , Number 5 (2002), in the article “NF- $\kappa$ B activates fibronectin gene expression in rat hepatocytes” by Byung-Heon Lee, Seung-Yoon Park, Kae-Bok Kang, Rang-Woon Park, and In-San Kim, pages 1218–1224 (doi:10.1016/S0006-291X(02)02356-2) | <b>167</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|

Number 2, November 29, 2002

|                                                                                                                                                                                                             |                                                                                                                                                                           |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Unusual cyanide bindings to a heme-regulated phosphodiesterase from <i>Escherichia coli</i> : effect of Met95 mutations                                                                                     | Miki Watanabe, Toshitaka Matsui, Yukie Sasakura, Ikuko Sagami, and Toru Shimizu                                                                                           | 169 |
| Preliminary crystallographic studies of two C-terminally truncated copper-containing nitrite reductases from <i>Achromobacter cycloclastes</i> : changed crystallizing behaviors caused by residue deletion | Hai-Tao Li, Tschining Chang, Ming-Yih Liu, Jean Le Gall, Xiao-Min An, Lu-Lu Gui, Ji-Ping Zhang, Dong-Cai Liang, and Wen-Rui Chang                                         | 173 |
| Evaluation of the roles that alkyl hydroperoxide reductase and Ohr play in organic peroxide-induced gene expression and protection against organic peroxides in <i>Xanthomonas campestris</i>               | Paiboon Vattanaviboon, Wirongrong Whangsuk, Warunya Panmanee, Chananat Klomsiri, Saovanee Dharmsthiti, and Skorn Mongkolsuk                                               | 177 |
| Sorbitol dehydrogenase overexpression potentiates glucose toxicity to cultured retinal pericytes                                                                                                            | Shinjiro Amano, Sho-ichi Yamagishi, Noriaki Kato, Yosuke Inagaki, Tamami Okamoto, Mitsuhiro Makino, Kaori Taniko, Hiroko Hirooka, Takahito Jomori, and Masayoshi Takeuchi | 183 |
| <i>Phanerochaete chrysosporium</i> NADPH-cytochrome P450 reductase kinetic mechanism                                                                                                                        | Andrew G.S. Warrilow, David C. Lamb, Diane E. Kelly, and Steven L. Kelly                                                                                                  | 189 |
| Differential expression of human 5S snoRNA genes                                                                                                                                                            | Long-Sen Chang, Shel-Yio Lin, Ann-Shung Lieu, and Tony-Lin Wu                                                                                                             | 196 |
| Ceramide induces neuronal apoptosis through the caspase-9/caspase-3 pathway                                                                                                                                 | Vilen A. Movsesyan, Alexander G. Yakovlev, Elvira A. Dabaghyan, Bogdan A. Stoica, and Alan I. Faden                                                                       | 201 |
| Immunoselection and adenoviral genetic modulation of human osteoprogenitors: in vivo bone formation on PLA scaffold                                                                                         | Daniel Howard, Kris Partridge, Xuebin Yang, Nicholas M.P. Clarke, Yasunori Okubo, Kazuhisa Bessho, Steven M. Howdle, Kevin M. Shakesheff, and Richard O.C. Oreffo         | 208 |
| An extensively associated dimer in the structure of the C713S mutant of the TIR domain of human TLR2                                                                                                        | Xiao Tao, Yingwu Xu, Ye Zheng, Amer A. Beg, and Liang Tong                                                                                                                | 216 |
| Estrogen activates cyclin-dependent kinases 4 and 6 through induction of cyclin D in rat primary osteoblasts                                                                                                | Masayo Fujita, Tomohiko Urano, Kuniko Horie, Kazuhiro Ikeda, Tohru Tsukui, Hideoki Fukuoka, Osamu Tsutsumi, Yasuyoshi Ouchi, and Satoshi Inoue                            | 222 |



|                                                                                                                                                                   |                                                                                                                                                                                                                                                                                   |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Putative homeodomain proteins identified in prokaryotes based on pattern and sequence similarity                                                                  | <b>Shashi Kant, Ashima Bagaria, and S. Ramakumar</b>                                                                                                                                                                                                                              | <b>229</b> |
| Functional expression of the FeMo-cofactor-specific biosynthetic genes <i>nifEN</i> as a NifE-N fusion protein synthesizing unit in <i>Azotobacter vinelandii</i> | <b>Man-Hee Suh, Lakshmi Pulakat, and Nara Gavini</b>                                                                                                                                                                                                                              | <b>233</b> |
| Cloning, expression, and genomic organization of mouse mp29 gene                                                                                                  | <b>Mau-Sun Chang, Chiung-Ya Chen, Hung-I Yeh, Chi-Chen Fan, Chang-Jen Huang, and Yuh-Cheng Yang</b>                                                                                                                                                                               | <b>241</b> |
| The substrate specificity of tripartite efflux systems of <i>Pseudomonas aeruginosa</i> is determined by the RND component                                        | <b>Takeshi Murata, Misato Kuwagaki, Tomoko Shin, Naomasa Gotoh, and Takeshi Nishino</b>                                                                                                                                                                                           | <b>247</b> |
| Decrease in cell viability in an RMF, $\sigma^{38}$ , and OmpC triple mutant of <i>Escherichia coli</i>                                                           | <b>V. Samuel Raj, Christine Füll, Madoka Yoshida, Kaori Sakata, Keiko Kashiwagi, Akira Ishihama, and Kazuei Igarashi</b>                                                                                                                                                          | <b>252</b> |
| Strain and strain rate activation of G proteins in human endothelial cells                                                                                        | <b>Craig B. Clark, Nathan L. McKnight, and John A. Frangos</b>                                                                                                                                                                                                                    | <b>258</b> |
| Chicken HDAC2 down-regulates IgM light chain gene promoter activity                                                                                               | <b>Shinji Takechi, Masaru Adachi, and Tatsuo Nakayama</b>                                                                                                                                                                                                                         | <b>263</b> |
| PqqC/D, which converts a biosynthetic intermediate to pyrroloquinoline quinone                                                                                    | <b>Hirohide Toyama, Hiroyuki Fukumoto, Megumi Saeki, Kazunobu Matsushita, Osao Adachi, and Mary E. Lidstrom</b>                                                                                                                                                                   | <b>268</b> |
| A rat monoclonal antibody that catalyses the hydrolysis of a nitrophenyl- $\beta$ -lactam                                                                         | <b>Elizabeth L. Ostler, Christopher J. Dean, Nicola Barber, Maurizio Valeri, Stuart James, Marina Resmini, Guillaume Boucher, Nickolas Romanov, Keith Brocklehurst, and Gerard Gallacher</b>                                                                                      | <b>273</b> |
| Regulation of the <i>pdx1</i> gene promoter in pancreatic $\beta$ -cells                                                                                          | <b>Susan C. Campbell and Wendy M. Macfarlane</b>                                                                                                                                                                                                                                  | <b>277</b> |
| Effect of mineralocorticoid deficiency on ion and urea transporters and aquaporin water channels in the rat                                                       | <b>Mamiko Ohara, Melissa A. Cadnapaphornchai, Sandra N. Summer, Sandor Falk, Jianhui Yang, Tatsuo Togawa, and Robert W. Schrier</b>                                                                                                                                               | <b>285</b> |
| Resistin is regulated by C/EBPs, PPARs, and signal-transducing molecules                                                                                          | <b>Haiyan Song, Nobuhiro Shojima, Hideyuki Sakoda, Takehide Ogihara, Midori Fujishiro, Hideki Katagiri, Motonobu Anai, Yukiko Onishi, Hiraku Ono, Kouichi Inukai, Yasushi Fukushima, Masatoshi Kikuchi, Hitoshi Shimano, Nobuhiro Yamada, Yoshitomo Oka, and Tomoichiro Asano</b> | <b>291</b> |
| Altered cocaine effects in mice lacking $\text{Ca}_v2.3$ ( $\alpha_{1E}$ ) calcium channel                                                                        | <b>Wenhua Han, Hironao Saegusa, Shuqin Zong, and Tsutomu Tanabe</b>                                                                                                                                                                                                               | <b>299</b> |

|                                                                                                                                                                   |                                                                                                     |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----|
| Organization and evolution of the glandular kallikrein locus in <i>Mus musculus</i>                                                                               | A. Yvonne Olsson and Å. Lundwall                                                                    | 305 |
| Isolation, identification, and synthesis of a disulfated sulfakinin from the central nervous system of an arthropod, the white shrimp <i>Litopenaeus vannamei</i> | P. Torfs, G. Baggerman, T. Meeusen, J. Nieto, R.J. Nachman, J. Calderon, A. De Loof, and L. Schoofs | 312 |
| Identification of an alternatively spliced isoform of the common cytokine receptor $\gamma$ chain in chickens                                                     | Wongi Min, Hyun Soon Lillehoj, and Raymond Hugh Fetterer                                            | 321 |
| Brain-specific expression of the nuclear actin-related protein ArpN $\alpha$ and its involvement in mammalian SWI/SNF chromatin remodeling complex                | Yukiko Kuroda, Yukako Oma, Katsuhiko Nishimori, Tsutomu Ohta, and Masahiko Harata                   | 328 |
| Expression of proteins and protein kinase activity during germination of aerial spores of <i>Streptomyces granaticolor</i>                                        | Karel Mikulík, Jan Bobek, Silvia Bezoušková, Oldich Benada, and Olga Kofroňová                      | 335 |

Number 3, December 6, 2002

**BREAKTHROUGHS AND VIEWS**

|                  |                               |     |
|------------------|-------------------------------|-----|
| Brief commentary | M. Schattner and M.A. Lazzari | 343 |
|------------------|-------------------------------|-----|

**REGULAR ARTICLES**

|                                                                                                                       |                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----|
| Expression of protective antigen in transgenic plants: a step towards edible vaccine against anthrax                  | Mohd. Azhar Aziz, Samer Singh, P. Anand Kumar, and Rakesh Bhatnagar                         | 345 |
| Isolation of pathogen-induced Chinese cabbage genes by subtractive hybridization employing selective adaptor ligation | Seung-Ho Ryang, Sam-Young Chung, Sung-Hee Lee, Jae-Soon Cha, Hak Yong Kim, and Tae-Ju Cho   | 352 |
| Transcriptional activation of the <i>c-fos</i> gene by a LIM protein, Hic-5                                           | Joo-ri Kim-Kaneyama, Motoko Shibamura, and Kiyoshi Nose                                     | 360 |
| Physical interaction between hepatitis C virus NS4B protein and CREB-RP/ATF6 $\beta$                                  | Wen-Yan Tong, Motoko Nagano-Fujii, Rachmat Hidajat, Lin Deng, Yuki Takigawa, and Hak Hotta  | 366 |
| $\alpha$ - and $\beta$ -secretase: profound changes in Alzheimer's disease                                            | Susan J. Tyler, David Dawbarn, Gordon K. Wilcock, and Shelley J. Allen                      | 373 |
| Validation and quantitation of an in vitro M-cell model                                                               | Peter Tyrer, A. Ruth Foxwell, Jennelle Kyd, Matthew Harvey, Phillip Sizer, and Allan Cripps | 377 |

|                                                                                                                                                                          |                                                                                                                                             |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Polychlorinated biphenyls suppress thyroid hormone-induced transactivation                                                                                               | <b>Toshiharu Iwasaki, Wataru Miyazaki, Akira Takeshita, Yoichiro Kuroda, and Noriyuki Koibuchi</b>                                          | <b>384</b> |
| Efficient uptake and rapid degradation of plasmid DNA by murine dendritic cells via a specific mechanism                                                                 | <b>Takaharu Yoshinaga, Kei Yasuda, Yoshiyuki Ogawa, and Yoshinobu Takakura</b>                                                              | <b>389</b> |
| Phosphate depletion enhances bone morphogenetic protein-4 gene expression in a cultured mouse marrow stromal cell line ST2                                               | <b>Masae Goseki-Sone, Asako Yamada, Ryoko Hamatani, Lena Mizoi, Tadahiro Iimura, and Ikuko Ezawa</b>                                        | <b>395</b> |
| The interaction of quercetin with human serum albumin: a fluorescence spectroscopic study                                                                                | <b>Bidisa Sengupta and Pradeep K. Sengupta</b>                                                                                              | <b>400</b> |
| Chemotaxis of a <i>Ralstonia</i> sp. SJ98 toward co-metabolizable nitroaromatic compounds                                                                                | <b>Gunjan Pandey, Ashvini Chauhan, Sudip K. Samanta, and Rakesh K. Jain</b>                                                                 | <b>404</b> |
| ABCC13, an unusual truncated ABC transporter, is highly expressed in fetal human liver                                                                                   | <b>Hikaru Yabuuchi, Shin-ichiro Takayanagi, Keigo Yoshinaga, Naoyuki Taniguchi, Hiroyuki Aburatani, and Toshihisa Ishikawa</b>              | <b>410</b> |
| Starvation-induced posttranscriptional control of rat liver mitochondrial citrate carrier expression                                                                     | <b>Luisa Siculella, Simona Sabetta, Roberta di Summa, Monica Leo, Anna Maria Giudetti, Ferdinando Palmieri, and Gabriele Vincenzo Gnoni</b> | <b>418</b> |
| Extracellular NAD <sup>+</sup> : a novel autocrine/paracrine signal in osteoblast physiology                                                                             | <b>Milena Romanello, Massimiliano Bicego, Doroti Pirulli, Sergio Crovella, Luigi Moro, and Paola D'Andrea</b>                               | <b>424</b> |
| Arachidonic acid stimulates internalisation of leptin by human placental choriocarcinoma (BeWo) cells                                                                    | <b>Asim K. Duttaroy, Jonathon Taylor, Margaret J. Gordon, Nigel Hoggard, and Fiona M. Campbell</b>                                          | <b>432</b> |
| The functional analysis of directed amino-acid alterations in ZntR from <i>Escherichia coli</i>                                                                          | <b>Saira Khan, Kathryn R. Brocklehurst, Gareth W. Jones, and Andrew P. Morby</b>                                                            | <b>438</b> |
| Estrogens (E <sub>2</sub> ) regulate expression and response of 1,25-dihydroxyvitamin D <sub>3</sub> receptors in bone cells: changes with aging and hormone deprivation | <b>Gustavo Duque, Khadija El Abdaimi, Michael Macoritto, Marilyn M. Miller, and Richard Kremer</b>                                          | <b>446</b> |
| Alternative splicing variants of the human <i>DBL (MCF-2)</i> proto-oncogene                                                                                             | <b>Koichiro Komai, Rie Okayama, Michinori Kitagawa, Hirofumi Yagi, Kazuo Chihara, and Shunichi Shiozawa</b>                                 | <b>455</b> |
| Dilinoleoylphosphatidylcholine decreases acetaldehyde-induced TNF- $\alpha$ generation in Kupffer cells of ethanol-fed rats                                              | <b>Qi Cao, Ki M. Mak, and Charles S. Lieber</b>                                                                                             | <b>459</b> |
| Human Na <sup>+</sup> -coupled citrate transporter: primary structure, genomic organization, and transport function                                                      | <b>Katsuhisa Inoue, Lina Zhuang, and Vadivel Ganapathy</b>                                                                                  | <b>465</b> |



|                                                                                                                                       |                                                                                                                                                    |            |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Ectodomain shedding of nectin-1 $\alpha$ by SF/HGF and TPA in MDCK cells                                                              | <b>Yoshinari Tanaka, Kenji Irie, Takeshi Hirota, Toshiaki Sakisaka, Hiroyuki Nakanishi, and Yoshimi Takai</b>                                      | <b>472</b> |
| Arteriovenous carboxyhemoglobin difference in critical illness: fiction or fact?                                                      | <b>Martin Westphal, Dina Eletr, Hans-Georg Bone, Christian Ertmer, Thomas Peter Weber, Hugo Van Aken, and Michael Booke</b>                        | <b>479</b> |
| Enhancement of sphingosine 1-phosphate-induced migration of vascular endothelial cells and smooth muscle cells by an EDG-5 antagonist | <b>Makoto Osada, Yutaka Yatomi, Tsukasa Ohmori, Hitoshi Ikeda, and Yukio Ozaki</b>                                                                 | <b>483</b> |
| Pro-inflammatory effect of TWEAK/Fn14 interaction on human umbilical vein endothelial cells                                           | <b>Norihiro Harada, Masafumi Nakayama, Hiroyasu Nakano, Yoshinosuke Fukuchi, Hideo Yagita, and Ko Okumura</b>                                      | <b>488</b> |
| Identification of human PMP34 as a peroxisomal ATP transporter                                                                        | <b>W.F. Visser, C.W.T. van Roermund, H.R. Waterham, and R.J.A. Wanders</b>                                                                         | <b>494</b> |
| Identification and recombinant production of human laminin $\alpha$ 4 subunit splice variants                                         | <b>Yoshitaka Hayashi, Kil-Hwan Kim, Hironobu Fujiwara, Chisei Shimono, Megumi Yamashita, Noriko Sanzen, Sugiko Futaki, and Kiyotoshi Sekiguchi</b> | <b>498</b> |
| Transduction of TAT fusion proteins into osteoclasts and osteoblasts                                                                  | <b>Svetlana Dolgilevich, Neeha Zaidi, Jianbo Song, Etsuko Abe, Baljit S. Moonga, and Li Sun</b>                                                    | <b>505</b> |
| Phosphorylation of Bruton's tyrosine kinase by c-Abl                                                                                  | <b>Carl-Magnus Bäckesjö, Leonardo Vargas, Giulio Superti-Furga, and C.I. Edvard Smith</b>                                                          | <b>510</b> |

**Number 4, December 13, 2002**

|                                                                                                                           |                                                                                                                                        |            |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------|
| Correlation between nitric oxide and cyclooxygenase-2 pathways in head and neck squamous cell carcinomas                  | <b>Oreste Gallo, Valentina Fabbroni, Iacopo Sardi, Lucia Magnelli, Vieri Boddi, and Alessandro Franchi</b>                             | <b>517</b> |
| Pancreastatin, a chromogranin A-derived peptide, activates protein synthesis signaling cascade in rat adipocytes          | <b>Carmen González-Yanes and Víctor Sánchez-Margalet</b>                                                                               | <b>525</b> |
| The extracellular calcium (Ca $_o^{2+}$ )-sensing receptor is expressed in myeloma cells and modulates cell proliferation | <b>Toru Yamaguchi, Mika Yamauchi, Toshitsugu Sugimoto, Dharminder Chauhan, Kenneth C. Anderson, Edward M. Brown, and Kazuo Chihara</b> | <b>532</b> |

|                                                                                                                              |                                                                                                                                                                                          |     |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| p53 codon 72 genotype affects apoptosis by cytosine arabinoside in blood leukocytes                                          | Massimiliano Bonafè, Stefano Salvioli, Cristiana Barbi, Michele Mishto, Chiara Trapassi, Claudia Gemelli, Gianluca Storci, Fabiola Olivieri, Daniela Monti, and Claudio Franceschi       | 539 |
| Expression of a novel member of sorting nexin gene family, <i>SNX-L</i> , in human liver development                         | Wei qi Zeng, Wuzhou Yuan, Yuequn Wang, Wei Jiao, Ying Zhu, Chunxia Huang, Dali Li, Yongqing Li, Chuanbing Zhu, Xiushan Wu, and Mingyao Liu                                               | 542 |
| Autoantibody to DNA binding protein B as a novel serologic marker in systemic sclerosis                                      | Doo-il Jeoung, Eun Bong Lee, Seongeun Lee, Yoon Lim, Dae-Yeon Lee, Jongwan Kim, Hae-Yeong Kim, and Yeong Wook Song                                                                       | 549 |
| Endothelin-1 is a potent stimulator of $\alpha 1\beta 1$ integrin-mediated collagen matrix remodeling by rat mesangial cells | A. Kitamura, S. Kagami, M. Urushihara, S. Kondo, M. Yoshizumi, T. Tamaki, and Y. Kuroda                                                                                                  | 555 |
| Two new scorpion toxins that target voltage-gated $\text{Ca}^{2+}$ and $\text{Na}^{+}$ channels                              | Timoteo Olamendi-Portugal, Blanca Inés García, Ignacio López-González, Jurg Van Der Walt, Karin Dyason, Chris Ulens, Jan Tytgat, Ricardo Felix, Alberto Darszon, and Lourival D. Possani | 562 |
| Mutations at the P1' position of Notch1 decrease intracellular domain stability rather than cleavage by $\gamma$ -secretase  | Yuval Blat, Jere E. Meredith, Qian Wang, Jodi D. Bradley, Lorin A. Thompson, Richard E. Olson, Andrew M. Stern, and Dietmar Seiffert                                                     | 569 |
| Nuclear phosphatases and the proteasome in suppression of STAT1 activity in hepatocytes                                      | Dongxu Liu, Jennifer Scafidi, Anne E. Prada, Kamyar Zahedi, and Alvin E. Davis III                                                                                                       | 574 |
| Cloning and expression of the human <i>N</i> -acetylglutamate synthase gene                                                  | Ljubica Caldovic, Hiroki Morizono, Maria Gracia Panglao, Rene Gallegos, Xiaolin Yu, Dashuang Shi, Michael H. Malamy, Norma M. Allewell, and Mendel Tuchman                               | 581 |
| Novel interaction at the Cdx-2 binding sites of the lactase-phlorizin hydrolase promoter                                     | Herbert M. van Wering, Leah Moyer, Richard J. Grand, and Stephen D. Krasinski                                                                                                            | 587 |
| The binding of the RyR2 calcium channel to its gating protein FKBP12.6 is oppositely affected by ARVD2 and VTSIP mutations   | Natascia Tiso, Michela Salamon, Alessia Bagattin, Gian Antonio Danieli, Francesco Argenton, and Marino Bortolussi                                                                        | 594 |
| Elevated apoptosis in pre-mature neurons differentiated from mouse ES cells containing a single human chromosome 21          | Mitsutaka Kadota, Yasuaki Shirayoshi, and Mitsuo Oshimura                                                                                                                                | 599 |
| Expression of a novel Krüppel-like zinc-finger gene, <i>ZNF382</i> , in human heart                                          | Kaimei Luo, Wuzhou Yuan, Chuanbing Zhu, Yongqing Li, Yuequn Wang, Wei qi Zeng, Wei Jiao, Mingyao Liu, and Xiushan Wu                                                                     | 606 |

|                                                                                                                                 |                                                                                                          |     |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----|
| Characterization of the specific cleavage of <i>ceiE7</i> -mRNA of the bactericidal ColE7 operon                                | Ssu-Jean Chang, Shih-Yang Hsieh, Hanna S. Yuan, and Kin-Fu Chak                                          | 613 |
| Characterization of a novel enoyl-acyl carrier protein reductase of diazaborine-resistant <i>Rhodobacter sphaeroides</i> mutant | Il-Han Lee, Eui-Jin Kim, Yoo-Hee Cho, and Jeong K. Lee                                                   | 621 |
| Molecular cloning and functional expression of a <i>Drosophila</i> receptor for the neuropeptides capa-1 and -2                 | Annette Iversen, Giuseppe Cazzamali, Michael Williamson, Frank Hauser, and Cornelis J.P. Grimmekhuijzen  | 628 |
| Characterization of tetrachlorohydroquinone reductive dehalogenase from <i>Sphingomonas</i> sp. UG30                            | M.B. Habash, L.A. Beaudette, M.B. Cassidy, K.T. Leung, T.A. Hoang, H.J. Vogel, J.T. Trevors, and H. Lee  | 634 |
| PAR3 $\beta$ , a novel homologue of the cell polarity protein PAR3, localizes to tight junctions                                | Motoyuki Kohjima, Yukiko Noda, Ryu Takeya, Naoaki Saito, Kosei Takeuchi, and Hideki Sumimoto             | 641 |
| Related dipeptide and characteristic dipeptide of optimal pH in $\alpha$ -amylase                                               | Ge-Xin Zhang and Wei-Jiang Li                                                                            | 647 |
| Nod1, a CARD protein, enhances pro-interleukin-1 $\beta$ processing through the interaction with pro-caspase-1                  | Nam Jin Yoo, Won Sang Park, Su Young Kim, John C. Reed, Seong Gon Son, Jung Young Lee, and Sug Hyung Lee | 652 |
| A target for phthalate ester embryotoxicity: development of the brine shrimp ( <i>Artemia salina</i> ) larvae                   | Roger A. Acey, Stacie Bailey, Patricia Healy, Chang Jo, Thomas F. Unger, and Richard A. Hudson           | 659 |
| Involvement of phospholipase D in the cAMP-regulated exocytosis of rat parotid acinar cells                                     | Yoko Dohke, Junko Fujita-Yoshigaki, Hiroshi Sugiya, Shunsuke Furuyama, and Miki Hara-Yokoyama            | 663 |
| ABCG2 confers resistance to indolocarbazole compounds by ATP-dependent transport                                                | Rinako Nakagawa, Yoshikazu Hara, Hiroharu Arakawa, Susumu Nishimura, and Hideya Komatani                 | 669 |
| The hypoxic core: a possible answer to the cancer paradox                                                                       | Michael Guppy                                                                                            | 676 |

Number 5, December 20, 2002

|                                                                                                                     |                                                                                                         |     |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----|
| Sinusoidal efflux of taurocholate correlates with the hepatic expression level of Mrp3                              | Hidetaka Akita, Hiroshi Suzuki, and Yuichi Sugiyama                                                     | 681 |
| Fluconazole downregulates metallothionein expression and increases copper cytotoxicity in <i>Microsporium canis</i> | Aumaid Uthman, Sassan Rezaie, Michael Dockal, Jozef Ban, Josef Söltz-Szöts, and Erwin Tschachler        | 688 |
| Leucine promotes glucose uptake in skeletal muscles of rats                                                         | Shinobu Nishitani, Tsuyoshi Matsumura, Shoji Fujitani, Ichiro Sonaka, Yutaka Miura, and Kazumi Yagasaki | 693 |



|                                                                                                                                                                      |                                                                                                                                                                            |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Arg tyrosine kinase is involved in homologous recombinational DNA repair                                                                                             | <b>Yingzhu Li, Hiroko Shimizu, Shuang-Lin Xiang, Yoshiro Maru, Noriaki Takao, and Ken-ichi Yamamoto</b>                                                                    | <b>697</b> |
| Subcellular localization of pentachlorophenol 4-monooxygenase in <i>Sphingobium chlorophenolicum</i> ATCC 39723                                                      | <b>Hong Wang, Varpu Marjomäki, Vladimir Ovod, and Markku S. Kulomaa</b>                                                                                                    | <b>703</b> |
| Solution structure of the ribosome-associated cold shock response protein Yfia of <i>Escherichia coli</i>                                                            | <b>Alexey Rak, Alexander Kalinin, Dmitry Shcherbakov, and Peter Bayer</b>                                                                                                  | <b>710</b> |
| Kinetic characterisation of primer mismatches in allele-specific PCR: a quantitative assessment                                                                      | <b>Christy M. Waterfall, Robert Eisenthal, and Benjamin D. Cobb</b>                                                                                                        | <b>715</b> |
| The function of the nuclear matrix attachment region of silkworm rDNA as an autonomously replicating sequence in plasmid and chromosomal replication origin in yeast | <b>Ying Chen, Mujun Zhao, Zai-Ping Li, and Ming-Liang He</b>                                                                                                               | <b>723</b> |
| Liganded VDR induces CYP3A4 in small intestinal and colon cancer cells via DR3 and ER6 vitamin D responsive elements                                                 | <b>Paul D. Thompson, Peter W. Jurutka, G. Kerr Whitfield, Sandy M. Myskowski, Kristina R. Eichhorst, Carlos Encinas Dominguez, Carol A. Haussler, and Mark R. Haussler</b> | <b>730</b> |
| Ghrelin increases anxiety-like behavior and memory retention in rats                                                                                                 | <b>Valeria P. Carlini, María E. Monzón, Mariana M. Varas, Andrea B. Cragolini, Helgi B. Schiöth, Teresa N. Scimonelli, and Susana R. de Barioglio</b>                      | <b>739</b> |
| $\gamma$ -Secretase activity is not involved in presenilin-mediated regulation of $\beta$ -catenin                                                                   | <b>Jere E. Meredith Jr., Qian Wang, Thomas J. Mitchell, Richard E. Olson, Robert Zaczek, Andrew M. Stern, and Dietmar Seiffert</b>                                         | <b>744</b> |
| Detection of protoporphyrin IX in envelope membranes of pea chloroplasts                                                                                             | <b>Anasuya Mohapatra and Baishnab C. Tripathy</b>                                                                                                                          | <b>751</b> |
| CTGF/Hcs24 interacts with the cytoskeletal protein actin in chondrocytes                                                                                             | <b>Gen Yosimichi, Satoshi Kubota, Takako Hattori, Takashi Nishida, Kumiko Nawachi, Tohru Nakanishi, Masafumi Kamada, Teruko Takano-Yamamoto, and Masaharu Takigawa</b>     | <b>755</b> |
| A $\text{Ca}^{2+}$ signal is found upstream of cytochrome <i>c</i> release during apoptosis in HeLa cells                                                            | <b>Yongmei Pu, Kathy Q. Luo, and Donald C. Chang</b>                                                                                                                       | <b>762</b> |
| Rab11-FIP4 interacts with Rab11 in a GTP-dependent manner and its overexpression condenses the Rab11 positive compartment in HeLa cells                              | <b>Deborah M.E. Wallace, Andrew J. Lindsay, Alan G. Hendrick, and Mary W. McCaffrey</b>                                                                                    | <b>770</b> |
| RNase E is involved in 5'-end 23S rRNA processing in $\alpha$ - <i>Proteobacteria</i>                                                                                | <b>Franziska Klein and Elena Evguenieva-Hackenberg</b>                                                                                                                     | <b>780</b> |

|                                                                                                                           |                                                                                                                                          |            |
|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Targeted gene correction of <i>hprt</i> mutations by 45 base single-stranded oligonucleotides                             | <b>Oliver Kenner, Andrea Kneisel, Jürgen Klingler, Britta Bartelt, Günter Speit, Walther Vogel, and Dieter Kaufmann</b>                  | <b>787</b> |
| Interaction of Axl receptor tyrosine kinase with C1-TEN, a novel C1 domain-containing protein with homology to tensin     | <b>Sassan Hafizi, Filiz Alindri, Roger Karlsson, and Björn Dahlbäck</b>                                                                  | <b>793</b> |
| The C-terminal domain of apolipoprotein A-I is involved in ABCA1-driven phospholipid and cholesterol efflux               | <b>Elda Favari, Franco Bernini, Patrizia Tarugi, Guido Franceschini, and Laura Calabresi</b>                                             | <b>801</b> |
| Identification of differentially expressed mRNA during pancreas regeneration of rat by mRNA differential display          | <b>H.W. Lim, J.E. Lee, S.J. Shin, Y.E. Lee, S.H. Oh, J.Y. Park, J.K. Seong, and J.-S. Park</b>                                           | <b>806</b> |
| The bovine lactoferrin region responsible for promoting the collagen gel contractile activity of human fibroblasts        | <b>Yoshiharu Takayama, Koko Mizumachi, and Toshiaki Takezawa</b>                                                                         | <b>813</b> |
| Interleukin-2 inhibits proliferation of HPV-associated tumor cells and halts tumor growth in vivo                         | <b>Patricia H. Casana, Hector Hernandez, and Manuel J. Arana</b>                                                                         | <b>818</b> |
| Design and functional analysis of actomyosin motor domain chimera proteins                                                | <b>Keiichi Yokoyama, Yuichi Hiratuka, Erika Akimaru, Keiko Hirose, Taro Q.P. Uyeda, and Makoto Suzuki</b>                                | <b>825</b> |
| Delayed induction of $\Delta$ -6 and $\Delta$ -5 desaturases by a peroxisome proliferator                                 | <b>Wei Song He, Takayuki Y. Nara, and Manabu T. Nakamura</b>                                                                             | <b>832</b> |
| Identification of genes induced by BRCA1 in breast cancer cells                                                           | <b>Arzu Atalay, Tim Crook, Mehmet Ozturk, and Isik G. Yulug</b>                                                                          | <b>839</b> |
| Tissue factor pathway inhibitor induces expression of <i>JUNB</i> and <i>GADD45B</i> mRNAs                                | <b>Hiroko Shirotani-Ikejima, Koichi Kokame, Tsutomu Hamuro, Guojun Bu, Hisao Kato, and Toshiyuki Miyata</b>                              | <b>847</b> |
| Different role of saturated and unsaturated fatty acids in $\beta$ -cell apoptosis                                        | <b>Katrin Eitel, Harald Staiger, Mathias D. Brendel, Daniel Brandhorst, Reinhard G. Bretzel, Hans-Ulrich Häring, and Monika Kellerer</b> | <b>853</b> |
| Characterization of the cysteine-rich calcium-binding S100A3 protein from human hair cuticles                             | <b>Kenji Kizawa, Heinz Troxler, Peter Kleinert, Takafumi Inoue, Masahiko Toyoda, Masaaki Morohashi, and Claus W. Heizmann</b>            | <b>857</b> |
| Recruitment of NBS1 into PML oncogenic domains via interaction with SP100 protein                                         | <b>Kazuhito Naka, Kyoji Ikeda, and Noboru Motoyama</b>                                                                                   | <b>863</b> |
| PGC-1 and PERC, coactivators of the estrogen receptor-related receptor $\gamma$                                           | <b>Moritz Hentschke, Ute Süssens, and Uwe Borgmeyer</b>                                                                                  | <b>872</b> |
| Identification and characterization of P15RS, a novel P15 <sup>INK4b</sup> -related gene on G <sub>1</sub> /S progression | <b>Jun Liu, Huitu Liu, Xue Zhang, Ping Gao, Juan Wang, and Zhijun Hu</b>                                                                 | <b>880</b> |

|                                                                                                                                                      |                                                                                                                 |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------|
| Cyclooxygenase-2 increased the angiogenic and metastatic potential of tumor cells                                                                    | <b>Guoping Li, Tian Yang, and Jun Yan</b>                                                                       | <b>886</b> |
| Generation of a mouse monoclonal TSH receptor antibody with stimulating activity                                                                     | <b>S. Costagliola, J.D.F. Franssen, M. Bonomi, E. Urizar, M. Willnich, A. Bergmann, and G. Vassart</b>          | <b>891</b> |
| The fusion protein core of measles virus forms stable coiled-coil trimer                                                                             | <b>Jieqing Zhu, Catherine W.-H. Zhang, Yipeng Qi, Po Tien, and George F. Gao</b>                                | <b>897</b> |
| A novel anti-rheumatic drug, T-614, stimulates osteoblastic differentiation in vitro and bone morphogenetic protein-2-induced bone formation in vivo | <b>Kohji Kuriyama, Chikahisa Higuchi, Keiichi Tanaka, Hideki Yoshikawa, and Kazuyuki Itoh</b>                   | <b>903</b> |
| The structural transition of DNA-Tris(1,10-phenanthroline) cobalt(III) complexes in ethanol-water solution                                           | <b>Jianping Zheng, Zhuang Li, Aiguo Wu, Hualan Zhou, Hanying Bai, and Yonghai Song</b>                          | <b>910</b> |
| Oxysterol-activated LXR $\alpha$ /RXR induces hSR-BI-promoter activity in hepatoma cells and preadipocytes                                           | <b>Lene Malerød, Lene K. Juvet, Audun Hanssen-Bauer, Winnie Eskild, and Trond Berg</b>                          | <b>916</b> |
| Molecular identification of the first insect ecdysis triggering hormone receptors                                                                    | <b>Annette Iversen, Giuseppe Cazzamali, Michael Williamson, Frank Hauser, and Cornelis J.P. Grimmlikhuijzen</b> | <b>924</b> |
| Author Index for Volume 299                                                                                                                          |                                                                                                                 | <b>932</b> |





ACADEMIC  
PRESS

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SCIENCE @ DIRECT®

Biochemical and Biophysical Research Communications 290–299 (2003) 1–38

BBRC

[www.elsevier.com/locate/ybbrc](http://www.elsevier.com/locate/ybbrc)

## Cumulative Author Index\* Volumes 290–299

- Aarnes, M., **296**, 189  
 Abada, Paolo B., **293**, 1233  
 Abahamid, Abdelouahab, **298**, 277  
 Abate, Aida, **290**, 1539  
 Abbasi, Atiya, **291**, 176  
 Abbasian, Javaneh, **297**, 242  
 Abdelhay, Eliana, **291**, 655  
 Abderrahmani, Amar, **295**, 174  
 Abdul Rahman, Mariati, **295**, 1007  
 Abdul Rahman, Puteri Shafinaz, **295**, 1007  
 Abe, Etsuko, **299**, 505  
 Abe, Hironori, **290**, 1551; **290**, 998; **297**, 1011  
 Abé, Keisuke, **294**, 695  
 Abe, Michiko, **293**, 396  
 Abe, Miekio, **295**, 207  
 Abe, Nobuhiro, **297**, 523  
 Abé, Shin-Ichi, **294**, 695  
 Abiaka, M., **295**, 330  
 Abiru, Seigou, **294**, 414  
 Abraham, Elizabeth J., **293**, 670  
 Abraham, Nader G., **291**, 68; **296**, 1077  
 Abreu, Magda S.C., **296**, 596  
 Aburatani, Hiroyuki, **299**, 410  
 Acebal, Carmen, **291**, 593  
 Acey, Roger A., **299**, 659  
 Ackery, Heidi, **298**, 144  
 Acosta-Rivero, Nelson, **290**, 300; **295**, 81; **296**, 1303  
 Adachi, Hiroyuki, **296**, 305  
 Adachi, Kazuhiko, **290**, 1382  
 Adachi, Masaru, **299**, 263  
 Adachi, Osao, **299**, 268  
 Adachi, Susumu, **296**, 274  
 Adachi, Tetsuo, **296**, 182  
 Adam-Klages, Sabine, **294**, 672; **297**, 1186;  
 Adamo, Donatella, **293**, 974  
 Adamson, Roger H., **297**, 1318  
 Adat, Shaheen, **294**, 380  
 Adjei, Araba A., **292**, 402  
 Adler, Thure, **294**, 592  
 Adrian, Thomas E., **296**, 942  
 Affleck, J.A., **296**, 918  
 Aggarwal, Anel K., **297**, 1085  
 Agrawal, Ganesh K., **294**, 1009; **295**, 1041  
 Agrawal, Sudhir, **297**, 83  
 Aguiari, Gianluca, **292**, 761  
 Aguilar, Juan, **290**, 824  
 Agulles, Teresa, **292**, 222  
 Ahmad, Iqbal, **297**, 177  
 Ahmed, M., **293**, 816  
 Ahmed, Maqbool, **297**, 760  
 Ahmed, Sabbir, **294**, 180, 380  
 Ahmed, Zakaria, **290**, 391  
 Ahn, Bong W., **298**, 251  
 Ahn, Hye-Sung, **293**, 617  
 Ahn, Ji-Young, **298**, 225  
 Ahn, Joon-Ik, **296**, 1125  
 Ahn, Jung-Youb, **293**, 874  
 Ahn, Kwangseog, **296**, 247  
 Ahn, Myung-Ju, **296**, 1125  
 Ahn, Sun-Hee, **298**, 269  
 Ahnn, Joohong, **293**, 1295  
 Ahsan, Mansoor, **295**, 348  
 Ahuja, Nidhi, **296**, 1058  
 Aiba, Namiko, **293**, 1420  
 Aida, Katsumi, **293**, 327  
 Aiello, Francesca B., **297**, 498  
 Aigner, T., **290**, 743  
 Aikou, Takashi, **295**, 300  
 Ailenberg, Menachem, **298**, 110  
 Ainscow, Edward K., **291**, 1081  
 Aizawa, Masuo, **291**, 361  
 Aizawa, Tomoyasu, **294**, 1040  
 Akahane, Masuo, **290**, 131  
 Akaji, Masako, **291**, 1297  
 Akanuma, Hiroshi, **298**, 156  
 Akanuma, Masao, **291**, 868  
 Akao, Yukihiro, **291**, 861; **294**, 363  
 Akasaki, Kenji, **295**, 149  
 Akasaki, Takashi, **293**, 1571  
 Akasawa, Akira, **297**, 1282  
 Akashi, Hirofumi, **292**, 498  
 Akazawa, Hiroshi, **298**, 493  
 Akazawa, Satoru, **292**, 826  
 Akech, Jacqueline, **297**, 1043  
 Akee, Rhone K., **296**, 1228  
 Akhand, Anwarul A., **292**, 826  
 Akikusa, Shingo, **290**, 121  
 Akimaru, Erika, **299**, 825  
 Akioka, Kiyokazu, **297**, 433  
 Akita, Geoffrey Y., **291**, 908  
 Akita, Hidetaka, **299**, 681  
 Akita, Hidetoshi, **293**, 753  
 Akiyama, Hidehiko, **294**, 592  
 Akiyama, Ichiro, **298**, 24  
 Akiyama, Noriko, **293**, 1523  
 Akiyama, Shin-ichi, **291**, 806; **295**, 300  
 Akiyama, Tetsu, **294**, 1151  
 Akkari, P. Anthony, **296**, 300  
 Akopian, T.A., **293**, 155  
 Akuta, Teruo, **297**, 779  
 Alaimo, G., **293**, 1099  
 Alatalo, Sari L., **292**, 128  
 Al-Atrash, Gheath, **292**, 184  
 Alban, Rodrigo F., **294**, 1155  
 Albertioni, Freidoune, **293**, 1489; **298**, 338  
 Albesa, I., **297**, 1003  
 Alcázar, Alberto, **291**, 560  
 Aldini, Giancarlo, **298**, 699  
 Alejandro, Mary Ann, **291**, 692; **296**, 1083  
 Alenina, Natalia, **290**, 1072  
 Alessandro, Claudia, **295**, 519  
 Alessandro, R., **293**, 1099  
 Alfaro, M. Letica, **290**, 891; **294**, 660  
 Alibek, Darya, **293**, 349  
 Alibek, Ken, **293**, 349  
 Alikasifoglu, Ayfer, **295**, 312  
 Alimsardjono, Haryanto, **293**, 421  
 Alindri, Filiz, **299**, 793  
 Alipui, Olivier D., **292**, 1171  
 Allakhverdiev, Suleyman I., **290**, 339  
 Allegra, Carmen J., **297**, 17  
 Allen, Janet M., **290**, 438  
 Allen, Melanie R., **290**, 839  
 Allen, Shelley J., **291**, 501; **299**, 373  
 Allewell, Norma M., **299**, 581  
 Alonso, Claudio R., **295**, 1077  
 Alonso, Manuela, **292**, 250  
 Altenberg, Guillermo A., **296**, 388  
 Altieri, Fabio, **295**, 67  
 Altmann, Anja, **290**, 185  
 Alvar, Jorge, **294**, 567  
 Alvarez, Catalina, **295**, 81  
 Alvarez, Marco, **295**, 582  
 Alvarez-Manilla, Gerardo, **290**, 577  
 Alvarez Martinez, Cristina E., **291**, 655  
 Alvarez-Obregón, Julio C., **290**, 300  
 Álvarez-Vallina, Luis, **298**, 566  
 Alves, Jürgen, **295**, 198  
 Amagasa, Teruo, **297**, 17  
 Amaki, Toshihiro, **293**, 332  
 Amalric, François, **290**, 1151  
 Amankwa, L., **292**, 519  
 Amano, Mutsuki, **292**, 697; **297**, 1231  
 Amano, Shinjiro, **290**, 973; **296**, 877; **297**, 419; **299**, 183  
 Amanuma, Hiroshi, **290**, 1499  
 Amara, Francis, **295**, 702, 713  
 Amici, Adolfo, **297**, 835  
 Amiconi, Gino, **291**, 1123  
 Amidon, Gordon L., **292**, 632  
 Amler, Evžen, **297**, 154  
 Amoroso, Antonio, **293**, 586  
 Amsterdam, Abraham, **294**, 51  
 An, Chang Long, **291**, 425  
 An, Chun-San, **295**, 832  
 An, Kai-Nan, **295**, 382  
 An, Xiao-Min, **299**, 173  
 An, Y.J., **296**, 293  
 Anai, Motonobu, **299**, 291  
 Anand, Rene, **296**, 827  
 Anazawa, Hideharu, **298**, 144  
 Ancans, Janis, **290**, 844; **296**, 698  
 Andela, Valentine B., **297**, 237  
 Andersen, Mikkel H., **292**, 550  
 Anderson, Deborah H., **290**, 1267  
 Anderson, J.J.B., **295**, 417  
 Anderson, Kenneth C., **299**, 532  
 Andersson, Charlotte, **297**, 552  
 Andersson, Karin, **294**, 309  
 Andersson, Tommy, **292**, 1092  
 Ando, Kiichiro, **294**, 1121  
 Ando, Masanori, **296**, 172  
 Ando, Susumu, **290**, 994  
 Ando, Yoshitaka, **296**, 194  
 Andrae, Johanna, **296**, 604  
 Andreeva, Alexandra V., **293**, 1047  
 Andreu, Antoni L., **290**, 1593  
 Andreucci, Amy, **292**, 427  
 Andrews, Kim M., **290**, 839

\*Boldface numbers indicate volume; lightface numbers indicate pagination.

- Andriantsiferana, Marta, **293**, 1514  
 Aneeta, **296**, 1063  
 Anelli, Pierlucio, **293**, 100  
 Anello, Letizia, **295**, 519  
 Ankarcrona, Maria, **295**, 766  
 Annilo, Tarmo, **295**, 276  
 Antonaci, Salvatore, **292**, 161  
 Aoi, Noriko, **297**, 1135  
 Aoki, Annette M., **295**, 668  
 Aoki, Kimiko, **294**, 1101; **290**, 1282  
 Aoki, Naohito, **297**, 811  
 Aoki, Naoko, **291**, 296  
 Aoki, Ryo, **296**, 625  
 Aoki, Shigehisa, **294**, 906  
 Aoki, Shunsuke, **290**, 1282  
 Aoki, Tsutomu, **296**, 1097  
 Aono, Toshihiro, **290**, 1349  
 Aoyagi, Kazuhiko, **296**, 152  
 Aoyagi, Rika, **297**, 323  
 Aoyagi, Shigemi, **290**, 131  
 Aoyagi, Yutaka, **291**, 210  
 Aoyama, Tomoki, **295**, 354  
 Appelkvist, Eeva-Liisa, **291**, 1128  
 Appia-Ayme, Corinne, **296**, 737  
 Aqeilan, Rami, **290**, 332  
 Arai, Hiroyuki, **292**, 280  
 Arai, Honoka, **299**, 116  
 Arai, Kazumori, **291**, 623  
 Arai, Masahiro, **297**, 1108  
 Arai, Takeo, **297**, 1291  
 Arai, Yuji, **293**, 1530  
 Arai, Yuko, **293**, 1287  
 Arakawa, Hiroharu, **299**, 669  
 Araki, Takashi, **290**, 1275  
 Arana, Manuel J., **299**, 818  
 Araña Rosáinz, Manuel de J., **292**, 538  
 Arao, Yukitomo, **291**, 354  
 Aratani, Satoko, **292**, 274  
 Arazzi, Tzahi, **292**, 441  
 Arberry, L.A., **297**, 302  
 Arbez, Nicolas, **296**, 1317  
 Arese, Marzia, **291**, 1; **296**, 1272  
 Argenton, Francesco, **299**, 594  
 Argilés, Josep M., **293**, 1145  
 Ariga, Hiroyoshi, **293**, 899  
 Arighi, Elena, **296**, 515  
 Arima, Kunimasa, **293**, 1485  
 Arima, Toshiyuki, **290**, 1042  
 Arimura, Takuro, **291**, 385  
 Aristimuño, Patricia C., **296**, 388  
 Ariue, Barbara, **294**, 1155  
 Ariyoshi, Naoko, **292**, 153  
 Ariyoshi, Noritaka, **293**, 969  
 Armstrong, Don L., **296**, 806  
 Arnold, Heather B., **291**, 701  
 Arnould, Cécile, **291**, 406  
 Aronow, Bruce, **297**, 537  
 Arora, Sonia, **293**, 1073  
 Arribas, C., **296**, 425  
 Arroyo, Miguel, **291**, 593  
 Arthur, John M., **298**, 824  
 Aruoma, Okezie I., **296**, 1148  
 Arvanitidis, Morfakis, **299**, 155  
 Arveiler, Benoît, **290**, 1489  
 Aryal, Bishwa K., **295**, 724  
 Asabe, Shinichi, **290**, 242  
 Asada, Hidetsugu, **293**, 1530  
 Asada, Minoru, **296**, 62  
 Asada, Takashi, **293**, 1485  
 Asai, Akira, **298**, 144  
 Asai, Masashi, **293**, 1228  
 Asakura, Hitoshi, **290**, 16  
 Asami, Osamu, **293**, 489  
 Asamitsu, Kaori, **291**, 890  
 Asano, Akiko, **297**, 138, 143  
 Asano, Ryutaro, **295**, 31  
 Asano, Shinji, **293**, 1287  
 Asano, Tomoichiro, **299**, 291  
 Asashima, Makoto, **295**, 85  
 Ascenzi, Paolo, **294**, 1064  
 Ashhab, Yaqoub, **293**, 1066  
 Ashida, Toshifumi, **296**, 1286  
 Ashley, R.H., **297**, 317  
 Ashley, Stanley W., **293**, 391  
 Assereto, S., **294**, 547  
 Assmann, Gerd, **291**, 598; **296**, 1051  
 Asswad, Louay, **294**, 315  
 Ataka, Mitsuo, **290**, 994  
 Atalay, Arzu, **299**, 839  
 Atemezem, Aurélie, **296**, 507  
 Athanasiou, Meropi, **295**, 1135  
 Athar, Mohammad, **298**, 377  
 Atilano, Shari R., **295**, 668  
 Atkinson, T. Prescott, **298**, 501  
 Atsumi, T., **293**, 167  
 Atsuta, Yoshiaki, **291**, 296  
 Attfield, Kathleen R., **297**, 573  
 Audette, Marie, **293**, 1544  
 Audigier, Yves, **290**, 539  
 Audinot, Valérie, **295**, 841  
 Augstein, P., **290**, 443  
 Augusti-Tocco, Gabriella, **298**, 559  
 Aula, Pertti, **291**, 1173  
 Aumüller, Gerhard, **297**, 737  
 Auron, Philip E., **291**, 1071; **294**, 854; **290**, 1343  
 Avendaño, Amaranta, **293**, 79  
 Ávila-Rios, Santiago, **295**, 958  
 Aviram, Michael, **290**, 1529  
 Awad, Hani, **290**, 763  
 Awaji, Takeo, **292**, 8  
 Awan, Abida, **290**, 1030  
 Awata, Takuya, **290**, 131  
 Axelsson, Lena, **292**, 1092  
 Axt, Matthias, **299**, 109  
 Ayabe, Hiroaki, **296**, 785  
 Ayabe, Tokiyoshi, **296**, 1286  
 Ayala, J.A., **293**, 155  
 Ayala, Marcela, **295**, 828  
 Ayusawa, Dai, **293**, 293  
 Ayyagari, R., **293**, 356  
 Azad, Hamid Adib, **294**, 315  
 Azain, Michael J., **291**, 701  
 Azar, Yehudith, **290**, 332  
 Aziz, Mohd. Azhar, **299**, 345  
 Azizi Samir, Amina, **290**, 641  
 Azmi, Sameena, **295**, 24  
 Azrak, Rami G., **295**, 435  
 Azuma, Junichi, **298**, 433  
 Baader, Stephan L., **294**, 742  
 Baarends, Willy M., **292**, 58  
 Baba, Akemichi, **297**, 427  
 Baba, Akira, **294**, 359  
 Babajko, Sylvie, **293**, 55  
 Babiior, Bernard M., **292**, 1237  
 Bachman, Lori A., **297**, 645  
 Baciocchi, Enrico, **293**, 832  
 Bäckesjö, Carl-Magnus, **299**, 510  
 Bacsó, Zsolt, **290**, 635  
 Bader, Michael, **290**, 1072  
 Bae, David, **291**, 444  
 Bae, Insoo, **298**, 230  
 Bae, Jae Hoon, **290**, 1506; **298**, 230  
 Bae, Jong-Sup, **294**, 940  
 Bae, Soo-Jin, **298**, 486  
 Baek, Dongwon, **290**, 457  
 Baek, Kwang Jin, **293**, 383  
 Baek, Won Ki, **290**, 1506; **298**, 230  
 Baer, Anthony E., **293**, 932  
 Bagaria, Ashima, **299**, 229  
 Bagattin, Alessia, **299**, 594  
 Bagetta, Giacinto, **291**, 255  
 Baggerman, Geert, **296**, 1112; **299**, 312  
 Bahar, Rumana, **292**, 121  
 Bahk, Jeongdong, **290**, 457  
 Bahr, J., **290**, 443  
 Bai, Hanying, **299**, 910  
 Baile, Clifton A., **291**, 701  
 Bailor, Susanne M., **298**, 383  
 Bailey, Charles, **293**, 349  
 Bailey, C.J., **295**, 475  
 Bailey, Kathy R., **292**, 1017  
 Bailey, P.D., **296**, 918  
 Bailey, Stacie, **299**, 659  
 Bak, Judit, **295**, 806  
 Bakke, Ingunn, **297**, 335  
 Bakkellund, W., **296**, 671  
 Balandrán-Quintana, René R., **290**, 577  
 Baladrón, Victoriano, **291**, 193  
 Balazs, Louisa, **295**, 129, 136; **296**, 281  
 Baldoma, Laura, **290**, 824  
 Baldwin, Anne Norris, **292**, 1197  
 Ballabio, Andrea, **290**, 942  
 Ballester, Joan, **297**, 841  
 Balny, Claude, **293**, 593  
 Balogh, Gábor, **290**, 1535  
 Balsara, Rashna, **295**, 952  
 Ban, Jozef, **299**, 688  
 Ban, Liping, **293**, 50  
 Ban, Tadanobu, **294**, 770  
 Band, Hamid, **296**, 214  
 Bando, Masashige, **290**, 268  
 Banerjee, Amiya K., **293**, 264  
 Banerjee, Asok, **293**, 598  
 Banerjee, Rajat, **295**, 922  
 Bang, Yung-Jue, **292**, 383, 715  
 Bangert, Kristian, **290**, 518  
 Bannerman, Douglas D., **295**, 157  
 Banno, Yoshiko, **294**, 363  
 Bannon, Desmond I., **295**, 978  
 Bannow, Carol A., **291**, 313  
 Bao, Xiankun, **293**, 640  
 Bapat, M.M., **296**, 1180  
 Barabás, György, **290**, 1169  
 Barak, Ory, **292**, 819  
 Barańska, Jolanta, **296**, 484  
 Barash, Steve, **294**, 835  
 Baraz, Lea, **292**, 832  
 Barb, C.R., **293**, 1138; **298**, 333  
 Barber, Nicola, **299**, 273  
 Barbero, Daniela, **295**, 1085  
 Barbi, Cristiana, **299**, 539  
 Barbieri, M.A., **291**, 516  
 Bárcena, J. Antonio, **295**, 1046  
 Barciszewska, Mirosława Z., **294**, 145  
 Barciszewski, Jan, **294**, 145  
 Barecki-Roach, Mary, **297**, 412  
 Bared, Salim Maa, **293**, 759  
 Baritaki, Stavroula, **298**, 574  
 Bark, Samantha, **295**, 276  
 Barlow, Gillian M., **293**, 881; **299**, 1  
 Barnekow, Angelika, **295**, 678  
 Barnes, William S., **290**, 47  
 Bar-Noy, Shoshana, **297**, 956  
 Baron, Martin, **290**, 431  
 Baron, Roland, **298**, 185  
 Bar-Or, David, **290**, 1388  
 Barque, Jean-Philippe, **298**, 277  
 Barr, Alastair J., **293**, 647  
 Barra, Yves, **297**, 249  
 Barre, Annick, **296**, 1346  
 Barrera, Giuseppina, **295**, 267  
 Barrett, Siobhán R., **295**, 616  
 Barrette, Terry, **295**, 312  
 Barrientos, Laura G., **298**, 598  
 Barritault, Denis, **293**, 1174  
 Barroso, Madalena M.S., **296**, 1334  
 Barry, Richard, **298**, 350  
 Barsky, Sanford H., **290**, 602  
 Bartelt, Britta, **294**, 496; **299**, 787  
 Barton, M., **295**, 1057  
 Bartsch, Cornelia, **294**, 315  
 Barzaga, Nina G., **291**, 890  
 Bärzu, Octavian, **294**, 173  
 Bassères, Daniela Sanchez, **294**, 579  
 Basso, Luiz Augusto, **295**, 142  
 Bast, Aalt, **295**, 9  
 Bastida, Carmen M., **293**, 106  
 Bastide, B., **296**, 1267  
 Batenburg, Joseph J., **290**, 532  
 Batista, Isabel de Fátima Correia, **291**, 635; **294**, 879  
 Batra, Janendra K., **295**, 812; **297**, 390  
 Bauer, Christian, **294**, 650  
 Bauer, Lisa, **298**, 163  
 Baum, Bruce J., **291**, 34  
 Baum, Christopher, **291**, 617  
 Baum, Oliver, **297**, 1270  
 Baumann, Gert, **291**, 542; **294**, 315  
 Baumann, Sven, **297**, 459  
 Bause, Ernst, **291**, 751  
 Bayer, Peter, **299**, 710; **294**, 541  
 Bazzi, Mohammad D., **293**, 440



- Bazzini, Claudia, **290**, 1564  
 Beal, M. Flint, **290**, 1593  
 Beale, Elmus G., **290**, 1513  
 Beatty, Perrin, **290**, 602  
 Beaudette, L.A., **299**, 634  
 Beaulieu, J.F., **290**, 1308  
 Beaune, Philippe, **298**, 277  
 Beauséjour, Christian M., **293**, 1478  
 Beauverger, Philippe, **295**, 841  
 Beauvoit, Bertrand, **293**, 1383  
 Beazley, Wayne D., **292**, 805  
 Becerra, M.C., **297**, 1003  
 Beck, Bernard, **292**, 1031; **296**, 129  
 Becker, David, **298**, 651  
 Becker, Gerald W., **293**, 207  
 Becker, Lewis C., **294**, 1030  
 Beckmann, Nicolau, **292**, 216  
 Bednarczyk, Piotr, **294**, 1144  
 Beeber, Carla, **293**, 1374  
 Beerheide, W., **294**, 1052  
 Befani, Olivia, **296**, 840  
 Beffagna, Giorgia, **298**, 151  
 Beg, Amer A., **299**, 216  
 Beg, Anjum M., **298**, 75  
 Begum, Nasima-Mila, **292**, 957  
 Behar-Cohen, F., **295**, 336  
 Behrends, Sönke, **292**, 1057  
 Beier, Imke, **291**, 687  
 Beigneux, Anne P., **293**, 145  
 Bekar, Lane K., **298**, 531  
 Belakavadi, Madesh, **297**, 934  
 Belanger, Adam J., **291**, 908  
 Bell, Graeme I., **292**, 8  
 Bellon, Georges, **295**, 737  
 Belmonte, Silvia A., **295**, 1000  
 Belostotsky, Ruth, **290**, 332  
 Beltramini, L.M., **296**, 1194  
 Belyaev, Igor, **294**, 872  
 Benada, Oldrich, **299**, 335  
 Bénard, Didier, **298**, 185  
 Bender, J., **294**, 1052  
 Benderdour, Mohamed, **291**, 1151  
 Bene, László, **290**, 635  
 Benencia, Fabian, **292**, 860  
 Benjamin, J.B., **297**, 890  
 Ben-Naim, Mazal, **290**, 1376  
 Bennet, Anna, **299**, 25  
 Bennett, M.W., **290**, 1308  
 Bennett, Nelly, **293**, 1047  
 Benoit, Etienne, **292**, 558  
 Bentinger, Magnus, **291**, 1128  
 Bentwich, Zvi, **298**, 464  
 Ben-Yehudah, Ahmi, **290**, 332  
 Benz, Karin, **293**, 284  
 Beppu, Richiko, **290**, 1551  
 Beraldo, Heloisa, **296**, 241  
 Berest, Vladimir, **294**, 1144  
 Beretta, Giangiacomo, **298**, 699  
 Berg, Cathleen E., **293**, 1021  
 Berg, Tove, **293**, 907  
 Berg, Trond, **299**, 916  
 Bergamini, Carlo, **292**, 161  
 Berger, Markus, **294**, 650  
 Berger, Thorsten, **297**, 880  
 Berger, Trish, **290**, 921  
 Berggren, Per-Olof, **291**, 1038  
 Berglund, Lars, **292**, 550  
 Bergmann, A., **299**, 891  
 Bergmann, Carl W., **290**, 577  
 Bergstrom, James D., **297**, 600  
 Berks, Ben C., **296**, 737  
 Bernard, Laurence, **293**, 55  
 Bernardi, Jessica, **293**, 349  
 Bernassola, Francesca, **291**, 1123  
 Bernini, Franco, **299**, 801  
 Bertenshaw, Greg P., **293**, 23  
 Bertini, Giuseppe, **291**, 1123  
 Bertola, Antonella, **291**, 617  
 Bertoldi, Mariarita, **295**, 107  
 Bertrand, Jean-Rémi, **293**, 18; **296**, 1000  
 Bertucci, C., **293**, 1502  
 Besch, Dorothea, **295**, 342  
 Bessho, Kazuhisa, **292**, 144; **299**, 208  
 Besson, Françoise, **292**, 874  
 Betz, Christian, **298**, 383  
 Betz, Heinrich, **294**, 272  
 Bevan, Ruth, **294**, 1161  
 Bevec, D., **295**, 695  
 Beychenok, Sergey, **298**, 474  
 Beyersmann, Detmar, **296**, 923  
 Bezoušková, Silvia, **299**, 335  
 Bhagat, Lakshmi, **297**, 83  
 Bhat, M.K., **296**, 161  
 Bhat, Rajiv, **296**, 1058  
 Bhatia, Amina M., **293**, 691  
 Bhatnagar, Rajendra S., **292**, 819  
 Bhatnagar, Rakesh, **296**, 1058; **299**, 345  
 Bhatta, D., **290**, 1336  
 Bhattacharjee, Abesh Kumar, **291**, 669  
 Bhattacharyya, Sucharita, **293**, 1556  
 Bhavesh, Neel S., **293**, 427; **294**, 395  
 Bhirdo, Ken, **291**, 692  
 Bhushan, Bharat, **296**, 779  
 Biagini, Graziella, **290**, 1589  
 Biagioni, Stefano, **298**, 559  
 Biallek, Marco, **297**, 125  
 Bianchi, Giuseppe, **293**, 974  
 Bianchi, Vera, **293**, 258  
 Bianchin, Cristiana, **293**, 974  
 Bianconi, Silvia, **295**, 107  
 Biasi, F., **294**, 547  
 Bicego, Massimiliano, **296**, 685; **299**, 424  
 Bickers, David R., **298**, 377  
 Bidwai, Ashok P., **298**, 60  
 Biedi, Claudia, **295**, 1085  
 Bielicki, John K., **290**, 921; **297**, 206  
 Bierhuizen, Marti F.A., **292**, 71  
 Biessen, Erik A.L., **293**, 1279  
 Bieth, Eric, **290**, 851  
 Bietti, Massimo, **293**, 832  
 Biffo, Stefano, **295**, 295  
 Bifulco, Maurizio, **295**, 603  
 Billaud, Marc, **294**, 813  
 Billheimer, Jeffrey T., **298**, 317  
 Billiar, Timothy R., **291**, 150, 233  
 Billington, Richard A., **295**, 806  
 Binato, Renata, **291**, 655  
 Bing, Chen, **296**, 458  
 Binoux, Michel, **293**, 55  
 Bird, Phillip I., **291**, 951  
 Birukov, Konstantin G., **298**, 511  
 Bisby, Roger H., **299**, 155  
 Biscoglio de Jiménez Bonino, Mirtha J., **295**, 791  
 Bisgaard, Hanne Cathrine, **290**, 518  
 Bishop, June E., **298**, 414  
 Bisio, Antonella, **292**, 222  
 Bissell, D. Montgomery, **295**, 1077  
 Biswas, Surojit, **290**, 1336; **295**, 125  
 Bivalacqua, Trinity J., **298**, 427  
 Biyashev, D., **290**, 153  
 Björling, Pernilla, **295**, 970  
 Björntorp, Per, **293**, 629  
 Blackburn, Jonathan, **296**, 857  
 Blackshear, Perry J., **291**, 1119  
 Blair, Donald G., **295**, 1135  
 Blanchard, Barbara J., **293**, 1197, 1204  
 Blanchin, Stéphanie, **295**, 1118  
 Blaschke, Florian, **293**, 1431; **296**, 890  
 Blaschke, Sabine, **291**, 680  
 Bläsi, Udo, **297**, 1021  
 Blat, Yuval, **299**, 569  
 Blazer, Shraga, **296**, 93  
 Blechynden, Lori, **296**, 300  
 Blero, Daniel, **296**, 106  
 Blomberg, Pontus, **298**, 505  
 Blondeau, François, **291**, 305  
 Bloom, S.R., **295**, 475  
 Bloom, Stephen, **291**, 1208  
 Blosz, Tanja, **295**, 423  
 Blumberg, Peter M., **293**, 777  
 Blume, Astrid, **294**, 650  
 Blumenzweig, Immanuel, **292**, 832  
 Bobek, Jan, **299**, 335  
 Bochner, Bruce S., **291**, 111  
 Bock, Jürgen, **295**, 526  
 Böcker, U., **292**, 937  
 Böckers, Tobias M., **295**, 678  
 Bodi, Vieri, **299**, 517  
 Bodi, Ilona, **293**, 1405  
 Bodnár, Andrea, **290**, 1169  
 Boeggeman, Elizabeth, **291**, 1113  
 Boettcher, Alfred, **293**, 759  
 Boga, C., **293**, 1502  
 Bogardus, Clifton, **293**, 1161  
 Bohlander, Stefan K., **296**, 870  
 Bohle, D. Scott, **294**, 132  
 Bohl Masters, Kristyn S., **291**, 1014  
 Böhm, K.J., **293**, 602  
 Böhme, Claudia, **294**, 315  
 Boileau, Guy, **296**, 618  
 Bok, Song-Hae, **293**, 375  
 Bolan, Elizabeth, **297**, 659  
 Boles, Jeffrey O., **298**, 257  
 Bolkenius, U., **295**, 330  
 Bollo, Mariana, **293**, 314  
 Bolognesi, Martino, **294**, 1064  
 Bominaar, Emile L., **297**, 220  
 Bömmel, Heike, **292**, 841  
 Bonafè, Massimiliano, **299**, 539  
 Bonaly, Jacqueline, **298**, 277  
 Bondanelli, Marta, **297**, 828  
 Bone, Hans-Georg, **296**, 134; **299**, 479  
 Bonfils, Claude, **294**, 116  
 Bonilla, Félix, **296**, 580  
 Bonnans, C., **290**, 219  
 Bonnefont-Rousselot, Dominique, **293**, 1114  
 Bonnefoy, Régis, **296**, 443  
 Bonnet, Crystel, **297**, 787  
 Bonomi, M., **299**, 891  
 Bonvini, Ezio, **291**, 193  
 Bonz, Andreas W., **298**, 163  
 Boobis, Alan R., **297**, 65  
 Booke, Michael, **295**, 975; **296**, 134; **299**, 479  
 Borboni, Patricia, **290**, 85  
 Borchardt, Dan B., **296**, 806  
 Borchsenius, S.N., **293**, 155  
 Bordin, Luciana, **290**, 463  
 Borg, John J., **292**, 208  
 Borgmeyer, Uwe, **299**, 872  
 Borioli, Graciela A., **295**, 964  
 Borkow, Gadi, **298**, 464  
 Bornfeldt, Karin E., **290**, 663  
 Boros, Imre, **290**, 1535  
 Borrás, Teresa, **298**, 67  
 Borrello, Maria Grazia, **296**, 515  
 Borri Voltattorni, Carla, **295**, 107  
 Borsodi, A., **290**, 153  
 Borsodi, Anna, **292**, 231  
 Borst, Stephen E., **291**, 722  
 Bortolato, Muriel, **292**, 874  
 Bortolotti, N., **297**, 587  
 Bortolussi, Marino, **299**, 594  
 Bosc, Christophe, **297**, 787  
 Boszormenyi, I., **293**, 18  
 Botos, Istvan, **294**, 184  
 Bottà, Guido, **290**, 1564  
 Böttner, A., **298**, 798  
 Bottomley, Martyn, **293**, 1556  
 Bouchard, Claude, **293**, 629  
 Bouchard, Line, **296**, 759  
 Boucher, Guillaume, **299**, 273  
 Boulares, A. Hamid, **290**, 796; **291**, 191  
 Boulo, Viviane, **298**, 282  
 Boumis, Giovanna, **291**, 1123  
 Bourdi, Mohammed, **294**, 225  
 Bousquet, J., **290**, 219  
 Boutin, Jean A., **295**, 841  
 Bouvet, Philippe, **290**, 1151  
 Bove, Kathleen, **291**, 1001  
 Bovee-Geurts, Petra H.M., **297**, 847  
 Boyd, C.A.R., **296**, 918  
 Boyd, Michael R., **292**, 1036; **294**, 184  
 Boyer, David S., **295**, 668  
 Boynton, Alton L., **290**, 830  
 Brábek, Jan, **296**, 664  
 Bradamante, Silvia, **298**, 699  
 Bradbury, E. Morton, **297**, 1318



- Bradley, Jodi D., **299**, 569  
 Brake, R.L., **294**, 23  
 Brandenburg, K., **290**, 427  
 Brandhorst, Daniel, **299**, 853  
 Brandhorst, Gunnar, **297**, 737  
 Brändström, Helena, **293**, 13, 451  
 Brandt-Rauf, Paul W., **298**, 439  
 Brännström, Annika, **290**, 1462  
 Branza-Nichita, Norica, **296**, 470  
 Braun, Janice E.A., **291**, 1232  
 Braun, Sandra, **298**, 303  
 Braunewell, Karl-Heinz, **296**, 827  
 Brecker, Lothar, **297**, 232  
 Breedveld, Guido J., **292**, 58  
 Bregman, David B., **296**, 954  
 Breikers, Githa, **297**, 847  
 Breit, Stephen, **293**, 284; **299**, 109  
 Brendel, Mathias D., **299**, 853  
 Brenner, Birgit C., **291**, 237  
 Brenner, W., **294**, 1052  
 Bressler, Joseph P., **295**, 978  
 Bretzel, Reinhard G., **299**, 853  
 Breusch, Steffen J., **299**, 109  
 Brewer, H. Bryan, Jr., **295**, 276; **297**, 974  
 Brichese, Laetitia, **294**, 504  
 Bridges, Christy C., **291**, 291  
 Bridgham, Jamie T., **291**, 226  
 Briese, Lars, **292**, 734  
 Brindley, David N., **292**, 1255  
 Brismar, Kerstin, **296**, 255  
 Brocklehurst, Kathryn R., **299**, 438  
 Brocklehurst, Keith, **299**, 273  
 Brockmann, G., **298**, 798  
 Bronk, J.R., **296**, 918  
 Brooks, William H., **295**, 540  
 Brown, Donald J., **295**, 668  
 Brown, Edward M., **299**, 532  
 Brown, Kieron, **291**, 1  
 Brown, Mark A., **295**, 689  
 Brown, Nigel L., **295**, 616  
 Brown, Trellis, **296**, 1083  
 Brück, Thomas B., **297**, 406  
 Bruckdorfer, K. Richard, **292**, 175  
 Bruemmer, Dennis, **297**, 794  
 Brugge, Joan S., **294**, 293  
 Brunati, Anna Maria, **290**, 463  
 Brunet-Simon, A., **297**, 1197  
 Brunetti, Mauro, **297**, 498  
 Brunori, Maurizio, **291**, 1  
 Brusselmans, Koen, **295**, 428  
 Bruyns, Catherine, **296**, 106  
 Bruzzone, Roberto, **296**, 685  
 Brzin, Jože, **297**, 962  
 Bu, Guojun, **299**, 847  
 Bubb, Michael R., **294**, 101  
 Buck, A., **296**, 319  
 Bucurenci, Nadia, **294**, 173  
 Buddenberg, P., **296**, 319  
 Budhram-Mahadeo, Vishwanie, **294**, 487  
 Budt, Matthias, **292**, 749  
 Buechler, Christa, **293**, 759  
 Bugler, Béatrix, **295**, 673  
 Bujo, H., **295**, 630;  
 Bujo, Hideaki, **294**, 231  
 Bulfone, Alessandro, **290**, 942  
 Bulitta, Clemens J., **293**, 366; **297**, 1089  
 Bungenstock, Anne, **293**, 1431  
 Bunoust, Odile, **293**, 1383  
 Bureau, Michel F., **299**, 29  
 Burfeind, Peter, **293**, 816; **296**, 319; **297**, 737  
 Burgaud, Jean-Luc, **290**, 125  
 Burgelin, Ingrid, **290**, 1489  
 Burk, Raymond F., **292**, 45  
 Burkart, Volker, **294**, 592  
 Burke, Briant E., **291**, 433  
 Burke, James R., **293**, 1508  
 Bürkert, Eva, **295**, 985  
 Burlando, Bruno, **291**, 476  
 Burley, Glenn A., **290**, 1602  
 Burnett, Arthur L., **294**, 1030  
 Burston, Judy J., **291**, 501  
 Burton, Charlotte A., **294**, 88  
 Burton, Gregory R., **290**, 1066  
 Burton, Katherine J., **291**, 313  
 Burton, Teralee, **295**, 702, 713  
 Burzio, Luis O., **295**, 582  
 Buscaino, Alessia, **295**, 519  
 Bush, J., **291**, 939  
 Busquets, Silvia, **293**, 1145  
 Bustin, Michael, **293**, 1453  
 Butler, Clive S., **296**, 1272  
 Butters, Terry D., **290**, 1361  
 Buzello, Christoph, **298**, 537  
 Bykova, Irina A., **294**, 155  
 Bylund, Johan, **296**, 677  
 Byun, Si Myung, **290**, 585  
 Cabane, C., **293**, 112  
 Cabral, M. Guadalupe, **292**, 741  
 Cacciari, Emanuele, **290**, 1589  
 Cadnapaphornchai, Melissa A., **299**, 285  
 Cagen, Lauren M., **290**, 256  
 Cai, Lifeng, **297**, 446  
 Cai, Xuan, **297**, 510  
 Cairns, Nigel J., **296**, 970  
 Calabresi, Laura, **299**, 801  
 Calabrò, Viola, **291**, 1138  
 Calafat, Jero, **291**, 844  
 Caldas, Cristina, **294**, 879  
 Caldas, Teresa, **296**, 749  
 Calderon, J., **299**, 312  
 Calderwood, Stuart K., **291**, 1071  
 Caldovic, Ljubica, **299**, 581  
 Calero, Monica, **290**, 676  
 Callaghan, Paul D., **290**, 1545  
 Callebaut, Isabelle, **293**, 1153  
 Callewaert, Geert, **294**, 249  
 Calonghi, N., **290**, 1010; **293**, 1502  
 Calvo, Ezequiel L., **290**, 641  
 Camacho, Javier, **291**, 1287  
 Camakaris, Jim, **291**, 476  
 Camarao, Nathan, **291**, 692  
 Cambillau, Christian, **291**, 1  
 Camera, João Carlos, Jr., **297**, 1154  
 Cameron, Angus J. M., **290**, 438  
 Cameron, B., **292**, 519  
 Cameron-Smith, David, **294**, 301  
 Camici, G., **296**, 692  
 Campa, Ana, **292**, 869  
 Campa, Cristiana, **297**, 382  
 Campbell, Fiona M., **299**, 432  
 Campbell, Susan C., **299**, 277  
 Campbell-Thompson, Martha, **294**, 101  
 Campo, Laura, **292**, 601  
 Candelore, Mari Rios, **297**, 600  
 Canduri, Fernanda, **293**, 566; **295**, 142; **297**, 1154  
 Canfield, Ann E., **290**, 431  
 Cantrell, Doreen, **291**, 444  
 Cao, Aoneng, **291**, 795; **297**, 446  
 Cao, Hongxi, **293**, 1037  
 Cao, Kun, **296**, 463; **297**, 729  
 Cao, Qi, **294**, 849; **299**, 459  
 Cao, Xia, **297**, 288  
 Cao, Xuetao, **297**, 1033  
 Cao, Zhuoxiao, **292**, 50  
 Caplice, Nicole C., **293**, 578  
 Cappadone, C., **293**, 1502  
 Caputto, Beatriz L., **295**, 964  
 Caravelli, Antonella, **296**, 484  
 Carayon, Pierre, **295**, 1118  
 Cardinaud, Bruno, **295**, 841  
 Cardwell, Jennifer, **293**, 349  
 Carini, Marina, **298**, 699  
 Carley, W., **297**, 890  
 Carlier, Edmond, **291**, 640  
 Carlini, Valeria P., **299**, 739  
 Carlson, Mary, **292**, 274  
 Carlsson, Sven R., **291**, 844  
 Carmeliet, Peter, **295**, 428  
 Carmody, Ruaidhri, **297**, 78  
 Carneiro, Alan B., **293**, 1358  
 Caro, Pepi, **293**, 1066  
 Carolina Doretto, Maria, **296**, 241  
 Caron, Danielle, **293**, 1544  
 Carrascosa, J.M., **296**, 425  
 Carroll, James A., **292**, 236  
 Carroll, K., **293**, 1000  
 Carson, Daniel D., **293**, 1183  
 Carter, Daniel C., **291**, 813  
 Carter, Joanne E., **297**, 1062  
 Cartner, Laura K., **294**, 184  
 Carver, John A., **290**, 1602  
 Casado, F. Javier, **296**, 575  
 Casajuna, Nancy, **291**, 692  
 Casana, Patricia H., **299**, 818  
 Caselli, A., **296**, 692  
 Cassady, A. Ian, **295**, 387  
 Cassel, Tobias N., **293**, 907, 1333  
 Cassidy, M.B., **299**, 634  
 Castagnola, Massimo, **294**, 829  
 Castaño, Eduardo M., **292**, 571  
 Castell, José V., **294**, 864  
 Castelli, Giovanna Parenti, **290**, 1589  
 Castellon, Raquel, **295**, 668  
 Castillón, María Pilar, **291**, 593  
 Castleberry, Amanda M., **297**, 565  
 Castren, Eero, **290**, 1054  
 Castro, Ariel F., **296**, 388  
 Casu, Benito, **292**, 222  
 Cattaruzzi, Paola, **293**, 1544  
 Caudeville, Bernadette, **293**, 1114  
 Caussé, Elisabeth, **295**, 1052  
 Cauvi, David, **298**, 193  
 Cavalcanti, Maria do Socorro, **291**, 635  
 Cayrol, Corinne, **298**, 720  
 Cazzamali, Giuseppe, **298**, 31; **299**, 628, 924  
 Cazzulo, Juan José, **293**, 633  
 Cebrat, Malgorzata, **294**, 1036  
 Ceci, Marcello, **295**, 295  
 Cenedella, Richard J., **295**, 1027  
 Cerletti, Chiara, **297**, 498  
 Cerveñansky, Carlos, **293**, 537  
 Cha, Jae-Soon, **299**, 352  
 Cha, Jooneok, **297**, 854  
 Cha, Sang-Wook, **292**, 1081  
 Chabaud, Odile, **298**, 193  
 Chagnon, Monique, **293**, 629  
 Chak, Kin-Fu, **299**, 613  
 Chakrabarti, C., **295**, 125  
 Chakrabarti, Debopam, **298**, 371  
 Chakraborty, Amit, **295**, 922  
 Chakraborty, Chandan, **294**, 1079  
 Chakraborty, Niranjana, **293**, 1209  
 Chakraborty, Subhra, **293**, 1209  
 Champion, Hunter C., **298**, 427  
 Chamuleau, Robert A.F.M., **295**, 1156  
 Chan, Hsiao Chang, **291**, 101  
 Chan, R., **292**, 886  
 Chan, Te-chuan, **295**, 85  
 Chandrasekhar, Srinivasan, **290**, 42  
 Chanez, P., **290**, 219  
 Chang, Chih-Chuan, **296**, 710  
 Chang, Chi-Yao, **291**, 798  
 Chang, Donald C., **299**, 762  
 Chang, Hang, **291**, 185; **296**, 710  
 Chang, Lee-Shang, **295**, 167  
 Chang, Long-Sen, **294**, 574; **299**, 196  
 Chang, Mau-Sun, **299**, 241  
 Chang, Mi-Yoon, **296**, 1125  
 Chang, Simon H., **290**, 670  
 Chang, Soo-Ik, **293**, 433  
 Chang, Ssu-Jean, **299**, 613  
 Chang, Tschining, **294**, 60; **299**, 173  
 Chang, Wen-Rui, **294**, 60; **299**, 173  
 Chang, Yuh-Shin, **291**, 165  
 Chang, Yu-Sun, **294**, 586  
 Chang, Zongliang, **296**, 742, 1013  
 Chao, Yu-Sheng, **294**, 88  
 Chap, Hugues, **295**, 362; **297**, 261  
 Chaput, Evelyn, **295**, 1052  
 Charbonnier, Monique, **292**, 390  
 Charles, Grantley D., **294**, 101  
 Charlton, Steven J., **290**, 707  
 Charnaux, Nathalie, **296**, 507  
 Charrel, Rémi N., **296**, 1118  
 Charvèron, Marie, **295**, 362  
 Chary, Kandala V.R., **290**, 928; **295**, 730  
 Chatterjee, Amarnath, **293**, 427; **294**, 395  
 Chatterjee, Champak, **295**, 952

- Chatterjee, Chiradip, **292**, 579  
 Chatterjee, D., **293**, 412  
 Chaudhary, Anu, **294**, 293  
 Chaudhuri, Keya, **295**, 922  
 Chauhan, Ashvini, **299**, 404  
 Chauhan, Dharminder, **299**, 532  
 Chauhan, Vibha, **296**, 1058  
 Chavarria, Teresa, **293**, 497  
 Chavis, C., **290**, 219  
 Chay, Kee O., **298**, 251  
 Checcarelli, Nicoletta, **293**, 521  
 Checler, Frédéric, **290**, 1408  
 Chelysheva, V.V., **293**, 155  
 Chen, Bo, **295**, 1135  
 Chen, Changmin, **291**, 1071  
 Chen, Chien-Shu, **294**, 167  
 Chen, Chien-Tsu, **294**, 167  
 Chen, Chiung-Ya, **299**, 241  
 Chen, Guan-Ting, **295**, 167  
 Chen, Guoyou, **297**, 1033  
 Chen, Hao, **294**, 650  
 Chen, Hongjiang, **291**, 349  
 Chen, Hui-Ling, **296**, 48  
 Chen, Hung-Lin, **291**, 714  
 Chen, Jason J., **296**, 962  
 Chen, Jie, **291**, 945  
 Chen, Ji-hsiung, **291**, 1293  
 Chen, Jingzhou, **293**, 1396; **294**, 161  
 Chen, Jin-zhong, **291**, 414  
 Chen, Jun, **293**, 932  
 Chen, Kuo-Chiang, **292**, 79  
 Chen, Mercy, **290**, 366  
 Chen, Mingyi, **299**, 91  
 Chen, Sheldon, **296**, 1356  
 Chen, Show-Li, **298**, 805  
 Chen, Sung-Fang, **295**, 167  
 Chen, Tong-Sheng, **291**, 1272  
 Chen, Wen-Ya, **291**, 798  
 Chen, Xiangdong, **294**, 199  
 Chen, Xiao-Ning, **293**, 881  
 Chen, Xiaojian, **294**, 726  
 Chen, Xiao Qian, **296**, 657  
 Chen, X.W., **295**, 417  
 Chen, Yan, **298**, 121  
 Chen, Yangchao, **296**, 118  
 Chen, Yi-chen, **291**, 1293  
 Chen, Ying, **295**, 1102; **297**, 185; **299**, 723  
 Chen, Yongjing, **293**, 1191  
 Chen, Youhai H., **297**, 78  
 Chen, Yu-Ju, **295**, 167  
 Chen, Yuqing E., **294**, 597; **298**, 128  
 Chen, Zhifeng, **295**, 884  
 Chen, Zhuang, **290**, 66  
 Cheng, Dong, **298**, 317  
 Cheng, Hui-Wen, **291**, 714  
 Cheng, Jidong, **297**, 1128  
 Cheng, Michael M., **295**, 312  
 Cheng, Seng H., **291**, 908  
 Cheng, Yuan, **291**, 1276  
 Cheong, Young-Pyo, **291**, 663  
 Cheung, Kenneth M.C., **298**, 121  
 Chevalier, Jacqueline, **293**, 1370  
 Chi, Lang-Ming, **294**, 586  
 Chi, Yong Hun, **296**, 1152  
 Chiariotti, Lorenzo, **290**, 942  
 Chiba, Shigeru, **291**, 775  
 Chibalin, Alexander, **295**, 1035  
 Chicoine, Éric, **297**, 765  
 Chida, Michihiro, **293**, 969  
 Chien, Andy J., **296**, 911  
 Chien, Hung-Chien Roger, **297**, 282  
 Chien, Pei-Yu, **295**, 261  
 Chien, Shu, **292**, 892  
 Chien, Wei-Wen, **298**, 805  
 Chihara, Kazuo, **299**, 455, 532  
 Chijiwa, Kazuo, **292**, 474  
 Chin, H.S., **295**, 55  
 Ching, Yick-Pang, **294**, 120  
 Chiou, Shyh-Horng, **295**, 854; **297**, 309  
 Chiriac, Doru V., **297**, 134  
 Chitaley, Kanchan, **298**, 427  
 Cho, Bomsoo, **292**, 715; **295**, 119  
 Cho, Chi-Heum, **298**, 230  
 Cho, Daeho, **298**, 289  
 Cho, Hyesong, **296**, 1157  
 Cho, Jae-We, **298**, 230  
 Cho, Kae Won, **299**, 102  
 Cho, Kun, **295**, 903  
 Cho, Moo Je, **290**, 457; **296**, 1152  
 Cho, Moon J., **292**, 916; **296**, 1238  
 Cho, Pyo-Yun, **296**, 1238  
 Cho, Seong H., **294**, 1155  
 Cho, Soo Jeong, **291**, 425  
 Cho, Sung-Yup, **294**, 818  
 Cho, Tae-Ju, **299**, 352  
 Cho, Yoo-Hee, **299**, 621  
 Choe, Soo Young, **297**, 91  
 Choe, Youngshik, **290**, 1133  
 Choi, Bo Hwa, **291**, 1006  
 Choi, Cheol-Hee, **293**, 231; **295**, 832  
 Choi, Chul Yung, **294**, 753; **293**, 1248  
 Choi, Eui-Ju, **298**, 207  
 Choi, Hong Seok, **296**, 1005  
 Choi, Jeungsok, **292**, 756  
 Choi, Je-Yong, **294**, 940  
 Choi, Ji-Eun, **291**, 1239  
 Choi, Ji Suk, **293**, 231  
 Choi, Joungil, **293**, 1566  
 Choi, Jung-Do, **293**, 433  
 Choi, Jung-Hye, **296**, 1125  
 Choi, Jun Yeol, **290**, 730  
 Choi, Kai-Luk, **293**, 1161  
 Choi, Kyung-Ho, **294**, 818  
 Choi, Kyu Yeong, **293**, 1295  
 Choi, Myung-Sook, **293**, 375  
 Choi, Myung Suk, **290**, 457  
 Choi, S.S., **296**, 293  
 Choi, Yoon-Hyeok, **298**, 269  
 Choi, Youngjin, **294**, 785  
 Choi, Yung Hyun, **293**, 1248  
 Choi, Yunjaie, **293**, 163  
 Chojnacki, Tadeusz, **291**, 1128  
 Choo, Hui Hwa, **293**, 72  
 Chou, Kuo-Chen, **292**, 702  
 Chou, Ruey-Hwang, **293**, 298  
 Chou, San-Fang, **296**, 48  
 Choudhary, Shilpa, **297**, 46  
 Choudhury, Debi, **295**, 125  
 Choung, Pill-Hoon, **295**, 898  
 Chowdhury, Bhabadeb, **295**, 877  
 Choy, Hyon E., **293**, 1453  
 Christensen, Bruce M., **290**, 287  
 Christensen, Peter Astrup, **298**, 566  
 Christoffersen, Thoralf, **291**, 588  
 Chrousos, George P., **298**, 17  
 Chu, Maylene, **299**, 98  
 Chuang, Linda F., **296**, 477  
 Chuang, Ronald Y., **296**, 477  
 Chubb, Anthony J., **297**, 1225  
 Chudzinski-Tavassi, Ana Marisa, **294**, 879  
 Chun, Churl-Hong, **296**, 221  
 Chun, Eunyoung, **292**, 682  
 Chun, Hang Suk, **292**, 542  
 Chun, Jaesun, **298**, 207  
 Chun, Jang-Soo, **292**, 542; **296**, 221  
 Chun, Young-Jin, **298**, 687  
 Chung, Chan-Keun, **290**, 236  
 Chung, Chong-Pyoung, **295**, 898  
 Chung, Dae K., **290**, 236  
 Chung, Duane A., **293**, 1233  
 Chung, Hyesun, **298**, 613  
 Chung, Il Yup, **298**, 392  
 Chung, Jin-Sung, **296**, 233  
 Chung, Kwang-Hoe, **293**, 530  
 Chung, Kyung-Sook, **290**, 613  
 Chung, Sam-Young, **299**, 352  
 Chung, Sun-Mee, **293**, 433  
 Chung, Youn Wook, **293**, 1248  
 Chung, Young Chul, **294**, 753  
 Ciaccio, Chiara, **294**, 1064  
 Ciani, Joanne, **297**, 134  
 Cicek, Nurten, **293**, 182  
 Circo, Raffaella, **293**, 586  
 Ciriolo, Maria Rosa, **295**, 603  
 Cisneros, Bulmaro, **295**, 289  
 Citro, Gennaro, **291**, 1123  
 Clapham, John C., **290**, 707  
 Clari, Giulio, **290**, 463  
 Clark, Alvin J., **292**, 1187  
 Clark, Brian F.C., **298**, 566  
 Clark, Craig B., **299**, 258  
 Clark, David P., **295**, 92  
 Clarke, Anthony R., **291**, 501  
 Clarke, J.B., **294**, 988, 995  
 Clarke, Kristen J., **296**, 383  
 Clarke, Nicholas M.P., **292**, 144; **298**, 324; **299**, 208  
 Clarke, Steven D., **290**, 1295; **296**, 111  
 Clauss, Adam, **290**, 452  
 Clavey, Véronique, **293**, 1114  
 Clayton, L.W., **293**, 610  
 Clayton, Ray, **292**, 1179  
 Clément, Marie-Véronique, **290**, 1145  
 Clemmons, D.R., **294**, 988, 995  
 Clergeot, P., **297**, 1197  
 Clinton, Michael, **291**, 372  
 Clough, Jennifer, **296**, 261  
 Clynen, Elke, **296**, 1112  
 Coats, Stephen R., **297**, 1112  
 Cobb, Benjamin D., **299**, 715  
 Coelho, Luana C. B. B., **291**, 635  
 Coffman, K.T., **292**, 886  
 Cohen, Mark, **291**, 1208  
 Cohen-Gazala, Orit, **291**, 732  
 Colaço, Melwin, **296**, 1180  
 Colaanni, Graziana, **297**, 442  
 Cole, Kathleen J., **293**, 1497  
 Colepiccolo, Pio, **291**, 344; **295**, 50  
 Coletta, Massimo, **294**, 1064  
 Collen, Désiré, **295**, 428  
 Collier, I.D., **296**, 918  
 Collins, Heidi L., **297**, 134  
 Collins, Richard A., **297**, 267  
 Collins, Ruth N., **290**, 676  
 Colombatto, Sebastiano, **290**, 463  
 Colonna, Cecilia, **299**, 135  
 Colucci, Silvia, **292**, 161; **297**, 442  
 Combs, Christian, **297**, 974  
 Common, John E.A., **298**, 651  
 Conejo-Garcia, Jose-Ramon, **292**, 860  
 Conlon, J. Michael, **297**, 361  
 Connelly, Philip W., **290**, 391  
 Conrad, Craig C., **293**, 1566  
 Conrads, Thomas P., **290**, 885; **292**, 587  
 Contag, Christopher H., **293**, 1412  
 Conte, Françoise, **290**, 851  
 Contessi, S., **297**, 587  
 Conti, Franco, **291**, 1095  
 Contreras, Juan Antonio, **292**, 900  
 Contursi, Cristina, **295**, 324  
 Conway de Macario, Everly, **298**, 625  
 Cooper, Garth J.S., **293**, 1161  
 Cooper, Jonathan A., **294**, 293  
 Copeland, Terry D., **294**, 949  
 Coppari, Sabina, **295**, 67  
 Corasaniti, M. Tiziana, **291**, 255  
 Corazzari, Marco, **291**, 1123  
 Cordella-Miele, Eleonora, **295**, 877  
 Corden, Laura D., **297**, 818  
 Cordera, Renzo, **295**, 1085  
 Corey, Seth, **293**, 1426  
 Cornforth, John Warcup, **292**, 1129  
 Corta, Aintzane, **295**, 582  
 Cortazzo, Patricia, **293**, 537  
 Cortez, Leonardo M., **295**, 791  
 Cortopassi, Gino A., **298**, 750  
 Corzo, Gerardo, **293**, 1514  
 Coskun, Ünal, **298**, 383  
 Costa, Fernando Ferreira, **294**, 579  
 Costagliola, S., **299**, 891  
 Costantino, Mary E., **296**, 368  
 Coste, Jerome, **290**, 97  
 Costin, Gertrude-E., **293**, 918  
 Cotgreave, Ian, **292**, 904  
 Cots, J., **297**, 1197  
 Cottalasso, D., **294**, 547  
 Cougoule, Céline, **298**, 720  
 Couillaud, S., **293**, 38  
 Coukos, George, **292**, 860  
 Courtois, Y., **295**, 336



- Coux, Olivier, **295**, 1090  
 Covell, David G., **296**, 1228  
 Covington, Joseph W., **297**, 1112  
 Cowan, Kenneth H., **296**, 792  
 Cowburn, David, **296**, 1222  
 Cowden, Karen D., **290**, 1228  
 Cowley, Darrin J., **299**, 98  
 Cox, Jane A., **295**, 849  
 Coxon, Phil, **290**, 707  
 Crabtree, J.E., **295**, 695  
 Craft, Joseph, **293**, 1073  
 Cragnolini, Andrea B., **299**, 739  
 Crance, Jean-Marc, **294**, 16  
 Crane, Janet L., **296**, 67  
 Crawford, Erin L., **293**, 509  
 Crowley, Suzanne C., **291**, 466; **294**, 680  
 Cremades, Asunción, **293**, 106  
 Crépin, Michel, **293**, 1174  
 Cripps, Allan, **299**, 377  
 Crook, Tim, **299**, 839  
 Crovella, Sergio, **299**, 424  
 Crowley, Colin, **294**, 116  
 Crowley, Jan R., **291**, 692; **296**, 1083  
 Csóka, Antonei B., **292**, 819  
 Csonka, Csaba, **290**, 1535; **296**, 937  
 Csont, Tamás, **290**, 1535; **296**, 937  
 Cueille, Carine, **294**, 340  
 Cuff, Mark A., **292**, 1048  
 Cui, Jun-Ru, **295**, 182  
 Culler, Michael D., **297**, 828  
 Culliford, Steven J., **296**, 857  
 Culotta, Valeria C., **295**, 978  
 Curnow, S.J., **297**, 876  
 Currens, Michael, **296**, 1228  
 Curto, Ernest V., **291**, 1052  
 Cusack, Barry J., **291**, 433  
 Cutler, Dedra A., **291**, 522  
 Cutruzzolá, Francesca, **291**, 1  
 Czaja, K., **293**, 1138; **298**, 333  
 Czajkowski, Rafał, **296**, 484  
 Czene, Stefan, **294**, 872  
 Czyż, Agata, **292**, 333
- Dabach, Yedida, **290**, 1376  
 Dabaghyan, Elvira A., **299**, 201  
 d'Abramo, C., **294**, 547  
 Dacremont, G., **290**, 629  
 D'Adamio, Luciano, **295**, 324  
 Daehmlow, Steffen, **298**, 116  
 Dagorn, Jean Charles, **297**, 607; **290**, 641  
 Dahiya, Rajvir, **292**, 482; **294**, 464; **296**, 820, 1200; **297**, 558  
 Dahlbäck, Björn, **299**, 793  
 Dai, Bosong, **296**, 429  
 Dai, Fangyan, **293**, 1191  
 Dai, Li, **293**, 1514  
 Dajani, Rana, **290**, 967  
 Dakin, Catherine, **291**, 1208  
 Dallner, Gustav, **296**, 255  
 Dalvin, Sussie, **297**, 898  
 Daly, Catherine B., **297**, 1016  
 Damacela, Ingrid, **297**, 760  
 d'Amati, Giulia, **293**, 521  
 D'Amato, M., **293**, 1099  
 Damiano, Simona, **295**, 603  
 Damjanovich, László, **290**, 635  
 Damjanovich, Sándor, **290**, 635  
 Damron, Derek S., **293**, 383  
 D'Andrea, Paola, **296**, 685; **299**, 424  
 Daniele, Antonella, **292**, 161  
 Danieli, Gian Antonio, **298**, 151; **299**, 594  
 Danielson, U. Helena, **292**, 832  
 Danik, Marc, **290**, 1321  
 Danon, Moris J., **290**, 874  
 Danziger, Robert S., **296**, 755  
 Da Poian, Andrea T., **296**, 1334  
 Daram, Amrutha, **297**, 242  
 Darbon, Hervé, **291**, 640  
 Darbon, Jean-Marie, **294**, 976  
 Darkes, M.C., **292**, 519  
 Darling, Douglas S., **296**, 368  
 Darzson, Alberto, **299**, 562  
 Darzynkiewicz, Zbigniew, **297**, 1311  
 Das, Chandan K., **295**, 62  
 Das, Kumuda C., **295**, 62  
 Das, Salil K., **293**, 412; **297**, 1043  
 Das, Soumita, **295**, 922  
 Dasgupta, Rakhi, **295**, 125  
 Dashwood, Roderick H., **296**, 584  
 Dashwood, Wan-Mohaiza, **296**, 584  
 Da Silva-Azevedo, Luis, **297**, 1270  
 Date, Taro, **291**, 908  
 Datki, Zsolt, **292**, 931  
 Datta, Asis, **293**, 1209  
 Datta, Deepshikha, **296**, 988  
 Datta, K., **291**, 829  
 Dattagupta, J.K., **295**, 125  
 Daubner, S. Colette, **292**, 639  
 Daudel, Fritz, **296**, 134  
 Daull, Philippe, **296**, 618  
 Daumas, Frédéric, **295**, 610  
 D'Aurelio, Marilena, **290**, 1589  
 Daury, Marc-Cedric, **296**, 261  
 Dautzenberg, Frank M., **298**, 303  
 Davey, Grace C., **293**, 578  
 Davidson, Mercy M., **293**, 521  
 Davis, Alvin E., III, **299**, 574  
 Davis, Brian A., **293**, 1  
 Davis, Richard L., **291**, 1052  
 Davy, Alice, **291**, 1232  
 Davydov, Dmitri R., **294**, 806  
 Dawbarn, David, **291**, 501; **299**, 373  
 Dawe, Gavin S., **293**, 72  
 Daws, Lynette C., **290**, 1545  
 Dawson, Ted M., **294**, 1030  
 Deacon, Carolyn F., **294**, 1  
 Deák, Eleonóra, **290**, 1169  
 Dean, Christopher J., **299**, 273  
 Dean, Michael, **295**, 276  
 Deana, Atilio, **293**, 537  
 de Aós, Isabel, **291**, 593  
 de Azevedo, Walter Filgueira, Jr., **295**, 142; **297**, 1154  
 de Barioglio, Susana R., **299**, 739  
 Debatin, Klaus-Michael, **297**, 148  
 De Biasi, Silvia, **290**, 1564  
 de Boer, Onno J., **298**, 80  
 de Caestecker, Mark P., **293**, 1556  
 de Chesne, Reine, **296**, 1118  
 Decker, Stephan, **293**, 86  
 Deckers, Karin, **293**, 665  
 Declerck, Paul J., **295**, 737  
 De Clercq, Erik, **297**, 756  
 de Faire, Ulf, **299**, 25  
 Degl'Innocenti, Debora, **296**, 515  
 degli Uberti, Ettore C., **297**, 828  
 de Graaff, Esther, **292**, 58  
 DeGrip, Willem J., **297**, 847  
 Deguchi, Masatoshi, **297**, 59  
 Deiana, Monica, **296**, 1148  
 Deininger, Martin H., **298**, 520  
 De Jaco, Antonella, **298**, 559  
 Dejean, Laurent, **293**, 1383  
 de Kozak, Y., **295**, 336  
 de la Mata, Isabel, **291**, 593  
 de Lamballerie, Xavier, **296**, 1118  
 del Canto, Sergio G., **295**, 791  
 Del Duca, Claudio, **291**, 255  
 De Leo, G., **293**, 1099  
 Deleuze, Virginie, **299**, 29  
 Delgado, Mario, **293**, 771; **297**, 1181  
 Dell, Claire Domon, **297**, 607  
 Della-Fera, Mary Anne, **291**, 701  
 Delmas, Christelle, **294**, 976  
 De Loof, Arnold, **296**, 1112; **297**, 1140; **299**, 312  
 Delouvé, A., **294**, 108  
 del Senno, Lauro, **292**, 761  
 Del Soldato, Piero, **290**, 125  
 DeLuna, Alexander, **293**, 79  
 Demaree, Scott, **290**, 47  
 De Meo, Michel, **297**, 249  
 Demosky, Steven J., Jr., **297**, 974  
 Dempsey, Peter J., **294**, 1023  
 Demuth, Hans-Ulrich, **291**, 1302; **296**, 229  
 Denarier, Eric, **297**, 787  
 Denda, Mitsuhiro, **291**, 124  
 Denda, Sumiko, **291**, 124  
 Denenberg, Alvin G., **297**, 1264  
 Deng, Lin, **299**, 366  
 Deng, Meiyu, **290**, 1411  
 Deng, Wei-ping, **295**, 107  
 Deng, Xiaoying, **293**, 1426  
 Deng, Xiong, **290**, 256  
 Deng, Xiyun, **296**, 792  
 Deng, Zhichao, **296**, 67  
 Denison, Michael S., **296**, 799  
 Denman, Robert B., **292**, 1063  
 Dennery, Phyllis A., **290**, 1539  
 Dennis, Jonathan H., **294**, 487  
 Denoulet, Philippe, **297**, 787  
 de Oliveira, Jaim Simões, **295**, 142  
 de Oliveira, Maria Leonor Sarno, **294**, 879  
 de Oliveira, Mariana Cabral, **295**, 50  
 Depardon, Francisco, **295**, 289  
 Depoortere, Inge, **293**, 1223  
 Deprez, Pierre, **298**, 185  
 Dériard, B., **293**, 112  
 Derksen, Patrick W.B., **298**, 80  
 Deronzier, Alain, **290**, 97  
 De Sanctis, Giampiero, **294**, 1064  
 De Smedt, Humbert, **294**, 249  
 Dessi, M. Assunta, **296**, 1148  
 Detmers, Patricia A., **294**, 88  
 Deutsch, M., **290**, 1573  
 Devenish, Rodney J., **298**, 707  
 de Vernejoul, Marie-Christine, **294**, 340  
 de Ward, Michel, **291**, 640  
 Dewaste, Valérie, **291**, 400  
 Dey, Madhusudan, **293**, 403  
 Deyama, Yoshiaki, **298**, 240  
 Dhalla, Naranjan S., **293**, 727  
 Dharmstithi, Saovane, **299**, 177  
 Dhillon, Waljit, **291**, 1208  
 Di, Wei-Li, **298**, 651  
 Di, Yujun, **297**, 528  
 Dianza, Mario U., **295**, 267  
 Diaz-Hernandez, Miguel, **295**, 849  
 Di Bella, M.A., **293**, 1099  
 Dibrov, Alex, **295**, 702, 713  
 Dickson, George, **293**, 1265  
 Dickson, Suzanne L., **293**, 560  
 Di Cosmo, Anna, **293**, 1536  
 Di Cristo, Carlo, **293**, 1536  
 Di Cristofano, Antonio, **291**, 1138  
 Dienes, H.P., **296**, 374  
 Diestel, Simone, **296**, 721  
 Dietrich, Cornelia, **292**, 195  
 Dieudonne, Marie-Noelle, **293**, 622  
 Diwald, Linda, **291**, 421  
 Di Iorio, Enzo, **296**, 685  
 DiMauro, Salvatore, **293**, 521  
 Dimitrijevic, Ivan, **292**, 1092  
 Ding, Chang-Lin, **296**, 67  
 Ding, Wen-Xing, **291**, 321  
 Ding, Xian-Zhong, **296**, 942  
 Di Pancrazio, F., **297**, 587  
 d'Ischia, Marco, **293**, 1536  
 Di Simone, Paola, **295**, 519  
 di Summa, Roberta, **299**, 418  
 Dixon, Cynthia, **291**, 1252  
 Djanani, Angela, **297**, 806  
 Dobbins, David E., **294**, 1114  
 Dockal, Michael, **299**, 688  
 Doerhoefer, Sabine, **295**, 636  
 Dohke, Yoko, **299**, 663  
 Dohm, G. Lyris, **292**, 409  
 Doi, Mitsuhiro, **290**, 381  
 Doi, Mitsunobu, **297**, 138, 143  
 Doi, Roy H., **296**, 477  
 Doi, Takefumi, **290**, 858; **294**, 521, 528  
 Doi, Takeshi, **293**, 542  
 Doi, Tomoko, **295**, 756  
 Doillon, Charles, **293**, 1544  
 Dokiya, Yuko, **299**, 57  
 Dolgilevich, Svetlana, **299**, 505  
 Dolowy, Krzysztof, **294**, 1144  
 Dolphin, A. C., **290**, 1246



- Dombrosky-Ferlan, Patrice, **293**, 1426  
Domenicotti, C., **294**, 547  
Domingo, Nicole, **292**, 390  
Dominguez, Orlando, **293**, 1066  
Dominguez Del Angel, Victoria, **293**, 1153  
Donahue, J. Kevin, **294**, 1030  
Donati, Ivan, **297**, 382  
Donato, M. Teresa, **294**, 864  
Dondero, Francesco, **291**, 476  
Dong, Hong-Yan, **294**, 602; **298**, 675  
Dong, Lily Q., **294**, 136  
Dong, Xuan, **292**, 944  
Dooley, Thomas P., **291**, 1052  
Doretto, Maria Carolina, **296**, 241  
Dorff, Gernot, **293**, 842  
Döring, Britta, **296**, 721  
Døsen, Guri, **297**, 912  
Dötsch, Jörg, **291**, 1160  
Doucet, Johanne, **290**, 783  
Douguet, Dominique, **294**, 173  
Doura, Hideki, **294**, 1040  
Dourdin, Nathalie, **297**, 294  
Downey, K.J., **297**, 890  
Draganov, Dragomir, **290**, 391  
Drapeau, Mark David, **293**, 1262  
Dreger, Mathias, **291**, 421  
Drouet, Christian, **294**, 16  
Drouet, Emmanuel, **294**, 16  
Druker, Brian J., **291**, 744  
Dschietszig, Thomas, **294**, 315  
Du, Dan, **297**, 185  
Du, Jing-chun, **299**, 74  
Du, Minjie, **296**, 962  
Duan, Renqin, **294**, 384  
Duan, W. Rachel, **295**, 261  
Duarte, Adriana A.S., **294**, 579  
Dubinett, Steven M., **290**, 91  
Dubouzet, Joseph G., **290**, 998  
Ducommun, Bernard, **295**, 673  
Dudek, Steven M., **298**, 511  
Dueñas-Carrera, Santiago, **290**, 300  
Duffin, Kevin L., **292**, 236  
Dunant, Patrick, **292**, 626  
Duncan, Keith G., **292**, 1017  
Dunford, James E., **290**, 869  
Dunger, A., **290**, 443  
Dunlop, John, **294**, 655  
Dunstan, C., **293**, 38  
Dupret, Jean-Marie, **291**, 116; **293**, 783  
Dupuis, Franck, **293**, 1153  
Dupuis, Martine, **291**, 1151  
Duque, Gustavo, **299**, 446  
Durante, William, **291**, 1014  
Durantel, David, **296**, 470  
Durieux, Anne-Cécile, **296**, 443  
Duriez, Patrick, **293**, 1114  
Duschl, Albert, **292**, 841  
Duseti, Nelson J., **290**, 641  
Dutt, Previn, **297**, 294  
Duttaroy, Asim K., **299**, 432  
Duttenhöfer, Irina, **297**, 148  
Duverger, Nicolas, **297**, 974  
Dwek, Raymond A., **290**, 1361; **293**, 918; **296**, 470  
Dyason, Karin, **299**, 562  
Dymshits, Grigory, **296**, 194  
Dzantiev, B.B., **291**, 959  
Earnest, David, **292**, 20  
Eastman, Alan, **291**, 1258; **292**, 415  
Eaves-Pyles, Tonyia, **291**, 453  
Eberle, Alex N., **298**, 54  
Ebetino, Frank H., **290**, 869  
Ebina, Yousuke, **292**, 642  
Echetebeu, Clement, **296**, 429  
Eckel, Jürgen, **293**, 665  
Eckhart, Leopold, **293**, 722  
Eda, Akashi, **294**, 470  
Edelman, Aleksander, **294**, 1144  
Edelmann, Anke, **295**, 992  
Edgar, Alan D., **295**, 1052  
Edgar, Alasdair J., **292**, 617  
Edwards, Robert J., **297**, 65  
Edwards, Thomas A., **297**, 1085  
Edwin, F., **290**, 1441  
Efendic, Suad, **291**, 945, 1038  
Egan, Terrance M., **295**, 849  
Egashira, Toru, **290**, 713  
Egawa, Koichi, **296**, 194  
Egesten, Arne, **291**, 844  
Eggers, Jeffrey, **292**, 41; **297**, 506  
Eguchi, Akiko, **297**, 779  
Eguchi, Katsumi, **294**, 414; **296**, 26  
Eguchi, Satoru, **294**, 1023  
Eguchi, Takanori, **295**, 445  
Ehehalt, Robert, **293**, 30  
Ehlers, Mario R.W., **297**, 1225  
Ehrhardt, Anja, **294**, 864  
Ehrlich, Barbara E., **294**, 719  
Ehrlich, Ricardo, **293**, 537  
Eichhorst, Kristina R., **299**, 730  
Eickmann, Markus, **291**, 966  
Eilers, Friedrich, **293**, 1431  
Eisenberg, Iris, **294**, 1169  
Eisenblätter, Tanja, **293**, 1273  
Eisenthal, Robert, **299**, 715  
Eitel, Katrin, **299**, 853  
Eizuru, Yoshito, **296**, 651  
Ekberg, Karin, **295**, 1035  
Ekström, Ulf, **292**, 944  
Ekwall, Karl, **295**, 970  
El Abdaimi, Khadija, **299**, 446  
Elam, Marshall B., **290**, 256  
Elce, John S., **297**, 294  
Eldar-Finkelman, Hagit, **295**, 102  
El-Darwish, Kamel, **290**, 146  
Elder, James T., **295**, 1108  
Eldere, J. Van, **291**, 528  
Eletr, Dina, **299**, 479  
El Far, Oussama, **294**, 272  
Elgin, Eric, **295**, 276  
Elhammer, Åke P., **298**, 755  
Eliasson, Erik, **299**, 25  
Elkahloun, Abdel G., **294**, 225  
Ellinghaus, Peter, **296**, 343  
Ellington, W. Ross, **291**, 939  
Elliott, Austin C., **297**, 71  
El-Mowafy, Abdalla M., **291**, 1218  
el Mrabet, L., **290**, 629  
El-Obeid, A., **290**, 349  
El-Osta, Assam, **295**, 575  
Emanuelli, Monica, **297**, 835  
Embery, Graham, **292**, 727  
Emili, Andrew, **290**, 391  
Emons, Günter, **291**, 680; **294**, 11  
Emoto, Noriaki, **293**, 421  
Encinas Dominguez, Carlos, **299**, 730  
Endo, H., **297**, 72  
Endo, Hitoshi, **297**, 96  
Endo, Itaru, **296**, 497  
Endo, Masahiko, **293**, 220; **297**, 1167  
Endo, Takashi, **290**, 546; **291**, 41  
Endo, Tamao, **291**, 1283  
Endo, Yasuyuki, **292**, 1087  
Endou, Hitoshi, **290**, 482  
Engel, Thomas, **291**, 598; **296**, 1051  
Engel, W., **293**, 816; **296**, 319; **297**, 1049  
English, Denis, **290**, 552  
Ennion, Steven J., **291**, 611  
Enokido, Y., **294**, 268  
Enomoto, Nobuyuki, **291**, 55; **298**, 10  
Enomoto, Noriko, **297**, 346  
Enomoto, Shoji, **297**, 17  
Ensor, Nancy J., **294**, 798  
Eom, Soo Hyun, **290**, 558  
Epand, Raquel F., **298**, 744  
Epand, Richard M., **298**, 744  
Epstein, Charles, **291**, 714  
Epstein, David L., **294**, 981  
Epstein, Mary, **297**, 46  
Eraly, Satish A., **297**, 1159  
Erdmann, Jeanette, **298**, 116  
Erdmann, Volker A., **290**, 1583  
Erez, Omri, **295**, 1142  
Eriksen, Mark B., **295**, 401  
Erickson, Geoffrey R., **290**, 763  
Erickson, Jeffrey D., **290**, 903  
Eriksson, L.E.G., **299**, 85  
Eriksson, Staffan, **293**, 1489  
Erlanger, Bernard F., **294**, 116  
Ermolenko, D.N., **291**, 959  
Erneux, Christophe, **291**, 400; **296**, 106  
Eroini, Barbara, **296**, 515  
Erren, Michael, **291**, 598  
Ertl, Georg, **298**, 163  
Ertmer, Christian, **299**, 479  
Erwert, Ryan D., **295**, 157  
Esaki, Nobuyoshi, **293**, 1389  
Escalante, Carlos R., **297**, 1085  
Eschenhagen, Thomas, **293**, 1377  
Eskandarpour, Malihe, **298**, 505  
Eskild, Winnie, **293**, 1333; **299**, 916  
Estdale, Siân, **296**, 698  
Estève, Pierre-Olivier, **296**, 864; **297**, 765  
Estienne, Valérie, **295**, 1118  
Estronca, Luís M.B.B., **296**, 596  
Esumi, Hiroyasu, **290**, 263; **296**, 976  
Eszlinger, Markus, **290**, 1084  
Eto, Ko, **293**, 1485  
Eto, Tanenao, **293**, 741  
Ettala, Otto, **293**, 1060  
Ettrich, Rüdiger, **297**, 154  
Eubank, Darrell W., **290**, 1513  
Evangelista, Virgilio, **297**, 498  
Evangelisti, Valentina, **291**, 476  
Evans, Alida J., **291**, 1014  
Evans, Glenn F., **290**, 891; **294**, 660  
Evans, Richard J., **291**, 611  
Evguenieva-Hackenberg, Elena, **299**, 780  
Exton, John H., **290**, 375  
Eyraud, Annie, **293**, 1370  
Ezaki, Osamu, **296**, 395  
Ezawa, Ikuko, **299**, 395  
Fabbroni, Valentina, **299**, 517  
Fabian, Heinz, **297**, 962  
Fabozzi, Giulia, **294**, 1064  
Fabra, Angels, **296**, 267  
Facchin, Sonia, **296**, 1366  
Faden, Alan I., **299**, 201  
Fahlman, Christian S., **291**, 1045; **297**, 163  
Faith, Robert, **291**, 692  
Fajloun, Ziad, **291**, 640  
Falcón, Viviana, **290**, 300  
Falk, Sandor, **299**, 285  
Fall, Ray, **294**, 71  
Fallgren, Åsa B., **291**, 1146  
Fallone, Frederique, **297**, 249  
Fan, Chi-Chen, **299**, 241  
Fan, Ming, **290**, 1411  
Fan, Xueli, **296**, 962  
Fan, Yi, **293**, 979  
Fanani, Maria L., **295**, 964  
Fang, Jianmin, **290**, 287  
Fang, Xiaohong, **292**, 31  
Fang, Yun, **290**, 1267  
Farina, Francesca, **298**, 559  
Farjah, Mariam, **296**, 755  
Farrar, William L., **292**, 287  
Farrelly, Ellyn R., **294**, 680  
Fasshauer, Mathias, **290**, 1084  
Fathallah, Mohamed, **291**, 640  
Fato, Romana, **290**, 1589  
Fauchère, Jean-Luc, **295**, 841  
Faury, Gilles, **290**, 97  
Fauser, Sascha, **295**, 342  
Faust, Dagmar, **292**, 195  
Faust, Michael, **296**, 13  
Favari, Elda, **299**, 801  
Favre, Alain, **297**, 714  
Febbraio, Mark A., **296**, 1264  
Fedarko, Neal, **291**, 111  
Fedele, Monica, **290**, 942  
Federico, Rodolfo, **296**, 840  
Feingold, Kenneth R., **293**, 145; **295**, 249  
Feldmann, Heinz, **296**, 1118

- Féliciangéli, Sylvain, **290**, 191, 1161
- Felix, Ricardo, **299**, 562
- Felschow, Donna, **292**, 587
- Feng, Jian Q., **293**, 1412
- Feng, Yi-Gang, **298**, 240
- Ferdinandusse, Sacha, **293**, 269
- Ferdinandy, Péter, **290**, 1535; **296**, 937
- Férec, Claude, **290**, 1489
- Fernandes, Jorge M.O., **296**, 167
- Fernandes Pedrosa, Matheus de F., **298**, 638
- Fernandez, Laurent, **290**, 851
- Fernández-Novell, Josep M., **297**, 841
- Fernández-Ortega, Celia, **292**, 538
- Fernetti, Cristina, **293**, 100
- Ferrat, Gilles, **291**, 640
- Ferreira, C., **290**, 494
- Ferrer, Joan C., **297**, 841
- Fertala, Andrzej, **295**, 382
- Fetterer, Raymond Hugh, **299**, 321
- Feuerstein, Giora Z., **299**, 14
- Fiedler, Fritz, **290**, 641
- Fievet, Catherine, **293**, 1114
- Figenschau, Y., **296**, 671
- Figueroa, Julio E., II, **293**, 847
- Filgueira de Azevedo, Walter, Jr., **293**, 566
- Filipek, Sławomir, **290**, 615
- Filipowicz, Witold, **291**, 875
- Fimland, Gunnar, **295**, 826
- Fina, Frederic, **297**, 249
- Fine, Robert L., **298**, 439
- Finkel, Toren, **294**, 245
- Fiocca, Roberto, **292**, 167
- Fiore, Gabriella, **293**, 1536
- Fiori, J., **293**, 1502
- Firulli, Anthony B., **297**, 870
- Fischer, Axel, **291**, 1160
- Fischer, Christian P., **296**, 1264
- Fischer, Heinz, **293**, 722
- Fischer, Lutz, **290**, 185
- Fischer, U., **290**, 443
- Fischer-Colbrie, Reiner, **297**, 806
- Fiser, András, **293**, 633
- Fish, Eleanor N., **291**, 744
- Fisher, A.C., **295**, 1150
- Fisher, Robert J., **296**, 1228; **297**, 24
- Fitch, J. Patrick, **290**, 1328
- Fitchmun, M., **293**, 1000
- Fitzpatrick, Paul F., **292**, 639
- Fixler, D., **290**, 1573
- Flamme, Ingo, **296**, 343
- Flasza, Marzena, **290**, 431
- Flatt, Peter R., **290**, 1420
- Fleck, Eckart, **293**, 1431; **296**, 890
- Fleckenstein, C., **294**, 1052
- Fleming, John V., **293**, 366; **297**, 1089
- Flesher, James W., **290**, 275
- Flick, Matthew J., **295**, 910
- Flinois, Jean-Pierre, **298**, 277
- Flis, Krzysztof, **294**, 1144
- Florian, Peter, **298**, 657
- Flugy, A.M., **293**, 1099
- Fodstad, Oystein, **291**, 617
- Foley, Sarah, **294**, 116
- Foley, Timothy D., **296**, 413
- Folk, Petr, **296**, 664
- Folkman, J., **292**, 886
- Forde, Cameron E., **290**, 1328
- Forgez, Patricia, **295**, 482
- Foricher, Rachel, **293**, 1114
- Formisano, Pietro, **295**, 603
- Forrest, Kathy, **295**, 540
- Forstová, Jitka, **294**, 962
- Forsyth, George W., **298**, 531
- Forte, Elena, **296**, 1272
- Forte, Trudy M., **290**, 921; **297**, 206
- Foster, David A., **293**, 201; **298**, 474
- Fountoulakis, Michael, **291**, 62; **293**, 836; **296**, 970
- Fournie-Zaluski, Marie-Claude, **297**, 931
- Fowler, Carol B., **293**, 1233
- Foxwell, A. Ruth, **299**, 377
- Fozard, John R., **292**, 216
- Franceschi, Claudio, **299**, 539
- Franceschini, Guido, **299**, 801
- Franchi, Alessandro, **299**, 517
- Frangos, John A., **299**, 258
- Frank, Cheryl, **295**, 435
- Frank, Gerald D., **294**, 1023
- Frank, Thomas, **291**, 542
- Franken, Sebastian, **294**, 742
- Franklin, Dawn M., **290**, 763
- Franssen, J.D.F., **299**, 891
- Fransvea, Emilia, **292**, 161
- Fraser, Paul, **290**, 1408
- Fraústo da Silva, J.J.R., **292**, 293; **297**, 689
- Fraylick, Jennifer E., **291**, 91
- Freed, L.E., **294**, 149
- Freeman, Lita, **295**, 276
- Freeman, Thomas L., **290**, 1513
- Freitas da Silveira, Nelson José, **293**, 566; **297**, 1154
- Frenc, Jennifer, **293**, 23
- Freund, Jean Noel, **297**, 607
- Freyssenet, Damien, **296**, 443
- Fricker, S.P., **292**, 519
- Friedler, Assaf, **292**, 832
- Friry, Claire, **290**, 1161
- Frischknecht, Hannes, **292**, 1044
- Fritsche, Andreas, **290**, 85
- Fritz, Hans, **291**, 635
- Fröde, S., **297**, 1049
- Froemmel, Cornelius, **298**, 116
- Frohme, Marcus, **293**, 1377
- Fromm, Michael, **298**, 657
- Frosch, Karl-Heinz, **291**, 680
- Frost, Anders, **293**, 451
- Fruchart, Jean-Charles, **293**, 1114
- Fu, Ling, **293**, 7
- Fu, Mingui, **294**, 597; **298**, 128
- Fu, Zhi-yan, **299**, 74
- Fuchigami, Takashi, **293**, 1107
- Fujii, Eriko, **292**, 675
- Fujii, Michihiko, **293**, 293
- Fujii, Noriko, **294**, 1047
- Fujii, Shin-ichiro, **290**, 1022
- Fujii, Tatsuya, **293**, 874
- Fujii, Yoshimi, **298**, 793
- Fujii-Kuriyama, Yoshiaki, **290**, 984; **295**, 657
- Fujiki, Takako, **290**, 909
- Fujiki, Takanori, **296**, 1286
- Fujiki, Yukio, **292**, 109; **293**, 225, 1523
- Fujimaki, Katsumichi, **297**, 1324
- Fujimori, Ken'ichi, **291**, 245
- Fujimori, Sayumi, **293**, 1445; **294**, 1177; **297**, 452
- Fujimori, Takahiro, **292**, 957
- Fujimoto, Nariaki, **293**, 554
- Fujimoto, Norihiro, **294**, 1047
- Fujimoto, Seiichiro, **296**, 1200
- Fujimura, Akio, **298**, 41
- Fujimura, Yoshinori, **297**, 193
- Fujimura, Yuka, **298**, 591
- Fujino, Masahiko, **293**, 396
- Fujino, Takahiro, **293**, 1007
- Fujisawa, Shin, **297**, 1324
- Fujisawa, Yuko, **291**, 1187
- Fujishima, Hiromi, **298**, 345
- Fujishiro, Midori, **299**, 291
- Fujita, Hiroki, **298**, 345
- Fujita, Hiroyoshi, **297**, 517
- Fujita, Koichi, **293**, 945
- Fujita, Mamoru, **294**, 441
- Fujita, Masayo, **299**, 222
- Fujita-Yoshigaki, Junko, **299**, 663
- Fujitani, Shoji, **291**, 738; **299**, 693
- Fujiwara, Hironobu, **299**, 498
- Fujiwara, Ikuko, **293**, 1550
- Fujiwara, Kenji, **290**, 898; **297**, 1108
- Fujiwara, Shinsuke, **295**, 508
- Fujiwara, Toshihiro, **292**, 456
- Fujiwara, Toshiyoshi, **290**, 1101
- Fujiyama, Asao, **291**, 210
- Fujiyoshi, Yoshinori, **295**, 756
- Fukami, Akiko, **291**, 1065
- Fukami, Harukazu, **290**, 1478
- Fukao, Hideharu, **295**, 428
- Fukasawa, Hiroshi, **292**, 1087
- Fukata, Yuko, **297**, 1231
- Fukino, Keiko, **293**, 332
- Fuku, Noriyuki, **290**, 1199
- Fukuchi, Kunihiro, **293**, 120
- Fukuchi, Mari, **291**, 675
- Fukuchi, Yoshinosuke, **299**, 488
- Fukuda, Hirotugu, **292**, 675
- Fukuda, Mamoru, **295**, 370
- Fukuda, Mitsunori, **293**, 899
- Fukuda, Seiji, **292**, 593
- Fukuda, Tetsuya, **291**, 567
- Fukuda, Toshifumi, **290**, 409
- Fukuda, Tsuyoshi, **298**, 433
- Fukuda, Yoshiaki, **290**, 1478
- Fukuda-Kamitani, Taeko, **295**, 774
- Fukuen, Shuichi, **298**, 433
- Fukuma, Mariko, **293**, 61
- Fukumori, Akio, **296**, 313
- Fukumoto, Hiroyuki, **299**, 268
- Fukuoka, Hideoki, **299**, 222
- Fukushi, Masaya, **297**, 17
- Fukushima, Yasushi, **299**, 291
- Fukusumi, Shoji, **293**, 396
- Fukuyo, Yayoi, **297**, 17
- Fulco, Armand J., **292**, 1221
- Fulhorst, Charles F., **296**, 1118
- Füll, Christine, **299**, 252
- Funa, Keiko, **296**, 604
- Funada-Wada, Ulala, **297**, 323
- Funahashi, Hisayuki, **290**, 1237
- Funahashi, Tooru, **292**, 781
- Funasaka, Tatsuyoshi, **293**, 192
- Funderud, Steinar, **297**, 912
- Fung, King Yip, **297**, 267
- Funk, J.L., **297**, 890
- Furman, Christophe, **293**, 1114
- Fürst, Zs., **290**, 153
- Fürste, Jens Peter, **290**, 1583
- Furuichi, Makio, **290**, 421
- Furukawa, Kiyoshi, **292**, 999
- Furukawa, Tatsuhiko, **291**, 806
- Furukawa, Yoichi, **292**, 498
- Furukawa, Yuji, **291**, 758
- Furukawa, Yusuke, **291**, 628
- Furusaka, Akihiro, **297**, 59
- Furuta, Kazuyuki, **297**, 1205
- Furutani, Takashi, **294**, 779
- Furuyama, Masako, **296**, 26
- Furuyama, Shunsuke, **299**, 663
- Furuyama, Tatsuo, **297**, 32
- Fusco, Alfredo, **290**, 942
- Fuse, Toshimitsu, **293**, 953
- Fushiki, Shinji, **297**, 433
- Fushinobu, Shinya, **293**, 489
- Futaki, Sugiko, **299**, 498
- Fuziwara, Shigeyoshi, **291**, 124
- Gabriel, Sherif E., **298**, 531
- Gagnon, Jacynthe, **293**, 1478
- Gagnon, Jean, **296**, 1186
- Gagyi, Cristina, **294**, 173
- Gaikwad, Nilesh W., **290**, 589
- Gaisano, Herbert, **292**, 980
- Galizzi, Jean-Pierre, **295**, 841
- Galla, Hans-Joachim, **293**, 1273
- Gallacher, Gerard, **299**, 273
- Gallardo, N., **296**, 425
- Gallegos, Rene, **299**, 581
- Galli, Aurelio, **299**, 1545
- Gallo, Oreste, **290**, 517
- Gal-On, Amit, **292**, 441
- Galson, Deborah L., **294**, 854
- Gambaryan, Stepan, **293**, 1438
- Gambriel, Herve A., **291**, 433
- Gamini, Amelia, **297**, 382
- G-Amlak, Maaza, **297**, 760
- Ganapathy, Malliga E., **291**, 291
- Ganapathy, Vadivel, **291**, 291; **299**, 465
- Gandre, Shilpa, **293**, 139
- Ganesh, Subramaniam, **291**, 1134
- Ganju, Neema, **291**, 1258
- Gansz, Barbara, **296**, 1051
- Gao, Bin, **298**, 297
- Gao, Chongfeng, **297**, 17



- Gao, Choungfeng, **297**, 1302  
 Gao, George F., **299**, 897  
 Gao, Ping, **299**, 880  
 Gao, X., **293**, 167  
 Garab, G., **293**, 416  
 Garavaglia, Maria Lisa, **290**, 1564  
 Garber, A.J., **296**, 293  
 García, Blanca Inés, **299**, 562  
 Garcia, Joe G.N., **298**, 511  
 Gardea, A.A., **295**, 98  
 Gardes-Albert, Monique, **293**, 1114  
 Gardiner, J.V., **295**, 475  
 Gardner, Brian, **290**, 91  
 Gardner-Thorpe, James, **293**, 391  
 Garel, Jean-Michel, **294**, 340  
 Garg, Satyendra K., **290**, 595  
 Garin, Daniel, **294**, 16  
 Garner, Brett, **290**, 1361  
 Garner, S.C., **295**, 417  
 Gartner, T. Kent, **292**, 916  
 Gaschott, Tanja, **290**, 504  
 Gáspár, Gábor, **297**, 756  
 Gaspar, Renato Tadeu, **297**, 1154  
 Gasparini, Paolo, **296**, 685  
 Gaspers, Lawrence D., **291**, 215; **292**, 787  
 Gassama-Diagne, Ama, **295**, 362  
 Gassmann, Max, **297**, 346  
 Gaston, Benjamin, **297**, 552  
 Gattegno, Liliane, **296**, 507  
 Gault, Victor A., **290**, 1420  
 Gaunitz, Frank, **296**, 1026  
 Gaur, Deepak, **297**, 390  
 Gaur, Reetika, **297**, 1121  
 Gautier, Jean, **298**, 377  
 Gavin, Paul, **298**, 707  
 Gavini, Nara, **299**, 233  
 Gaylor, James L., **292**, 1139  
 Ge, Gaoxiang, **290**, 914  
 Ge, Jiguang, **295**, 532  
 Gear, Adrian R.L., **297**, 129  
 Gebhard, S., **294**, 1052  
 Gebhardt, Rolf, **296**, 1026  
 Gejyo, Fumitake, **295**, 74; **296**, 497  
 Gelb, Michael H., **292**, 689  
 Gellert, Nina, **290**, 988  
 Gelman, Irwin H., **290**, 1368  
 Gemelli, Claudia, **299**, 539  
 Genazzani, Armando A., **295**, 806  
 Genda, Eiichi, **293**, 680  
 Gendrault, Jean-Louis, **291**, 764  
 Geng, Changshan, **291**, 1151  
 Geng, Jian-Guo, **296**, 406  
 Gengyo-Ando, Keiko, **293**, 698  
 Gennaro, Renato, **293**, 586  
 George, Jacob, **295**, 1077  
 George, John W., **294**, 225  
 George-Hyslop, Peter St, **290**, 1408; **292**, 571  
 Gerhard Ottmann, Oliver, **292**, 937  
 Gerini, Maria Francesca, **293**, 832  
 Germain-Lee, Emily L., **296**, 67  
 Geverd, Dawn A., **294**, 319  
 Ghaderi, Darius, **294**, 650  
 Ghaedi, Kamran, **293**, 1523  
 Ghatei, M.A., **295**, 475  
 Ghatei, Mohammad, **291**, 1208  
 Ghersi, Enrico, **295**, 324  
 Ghizzoni, Simona, **296**, 515  
 Ghosh, Aparajita, **297**, 1043  
 Giannelli, Gianluigi, **292**, 161  
 Giardina, Bruno, **294**, 829  
 Gibbons, Nora, **292**, 652  
 Gicklhorn, Dorothee, **291**, 966  
 Giesemann, Volkmar, **294**, 742  
 Gighioni, Barbara, **295**, 267  
 Gill, Sarjeet S., **293**, 549  
 Gille, Christoph, **298**, 116  
 Gillen, Clemens, **291**, 421  
 Gilles, Anne-Marie, **294**, 173  
 Gillette, Martha U., **292**, 20; **298**, 133  
 Gilmour, Peter S., **296**, 1148  
 Gilon, Chaim, **292**, 832  
 Gimble, Jeffrey M., **290**, 763; **294**, 371  
 Giordano, Carla, **293**, 521  
 Giragossian, Craig, **293**, 1053  
 Girault, J.M., **294**, 108  
 Girgis, S.I., **295**, 475  
 Giricz, Zoltán, **296**, 937  
 Gitler, Carlos, **290**, 624  
 Gittes, George K., **293**, 691  
 Giudetti, Anna Maria, **299**, 418  
 Giudicelli, Yves, **291**, 394; **293**, 622  
 Giuffré, Alessandro, **296**, 1272  
 Giuriato, Sylvie, **296**, 106  
 Gläser, Birgitta, **293**, 816; **296**, 319; **297**, 737  
 Glaser, Elzbieta, **293**, 321  
 Gläser, Regine, **297**, 1211  
 Glazova, Margarita, **293**, 1438  
 Glorioso, Joseph C., **291**, 855  
 Glover, Claiborne V.C., **298**, 60  
 Gnoni, Gabriele Vincenzo, **299**, 418  
 Goalstone, Marc Lee, **291**, 458  
 Godard, P., **290**, 219  
 Godefroy, Nelly, **298**, 282  
 Godovac-Zimmermann, Jasminka, **298**, 383  
 Goebel, Jens, **295**, 540  
 Goepfert, Christian, **291**, 598; **296**, 1051  
 Goettsch, Sandra, **294**, 541  
 Goettsch, Winfried, **294**, 541; **295**, 1057  
 Goetze, Stephan, **293**, 1431; **296**, 890; **297**, 794  
 Goffeau, André, **297**, 161  
 Gofflo, Dominique, **298**, 185  
 Gogvadze, Vladimir, **292**, 904  
 Goin, William F., **291**, 855  
 Göke, Alexandra, **297**, 78  
 Göke, Burkhard, **297**, 78  
 Göke, Rüdiger, **297**, 78  
 Goldberg, Mark, **291**, 908  
 Goldfarb, Ronald H., **292**, 184  
 Goldfine, Howard, **292**, 1117, 1201  
 Goldman, Rachel, **290**, 624  
 Goldmann, Wolfgang H., **290**, 749; **295**, 636  
 Goldsmith, Jeffrey F., **298**, 501  
 Goldsmith, Merrill, **296**, 792  
 Goldstone, A.P., **295**, 475  
 Goletz, Steffen, **298**, 566  
 Gomes, Cláudio M., **294**, 82  
 Gomez-Ambrosi, Javier, **296**, 458  
 Gomez-Cambronero, Julian, **293**, 463  
 Gómez-Díaz, Consuelo, **297**, 581  
 Gómez-García, Maria R., **295**, 890  
 Gómez-Lechón, M. José, **294**, 864  
 Gómez-Puyou, Armando, **295**, 958  
 Gomi, Kunihide, **293**, 120  
 Gomis, Roger R., **297**, 841  
 Gompel, Anne, **295**, 482  
 Gomyo, Hiroshi, **298**, 87  
 Gon, Yasuhiro, **295**, 663  
 Gonçalves-de-Andrade, Rute M., **298**, 638  
 Gonda, Kohsuke, **292**, 1098  
 Gong, Weimin, **295**, 884  
 Gong, Yandao, **290**, 1128  
 Gong, Yan-Qing, **293**, 979  
 Gonzales, Arlene D., **290**, 1328  
 González, Alicia, **293**, 79  
 Gonzalez, Sayonara, **291**, 655  
 González-Yanes, Carmen, **299**, 525  
 Gordon, John R., **290**, 66; **293**, 939  
 Gordon, Margaret J., **299**, 432  
 Gorman, Patricia, **290**, 431  
 Gorr, Sven-Ulrik, **299**, 98  
 Gorry, Philippe, **290**, 1489  
 Goseki-Sone, Masae, **299**, 395  
 Goshima, Fumi, **298**, 357  
 Goswami, Kalyan, **297**, 502  
 Goswami, S.K., **291**, 829  
 Gotanda, Yuhko, **290**, 242  
 Goto, Hitoshi, **296**, 497  
 Goto, Jun, **293**, 307; **294**, 429  
 Goto, Katsutoshi, **290**, 1237  
 Goto, Masahide, **296**, 350  
 Gotoh, Naomasa, **299**, 247  
 Gottfried, Yossi, **296**, 93  
 Gou, Xiao-jun, **292**, 1111  
 Gouda, Masaki, **297**, 950  
 Gourgues, M., **297**, 1197  
 Govorun, V.M., **293**, 155  
 Goyal, Anita, **295**, 812; **297**, 1121  
 Gracy, K. Noelle, **296**, 5; **297**, 6, 1071; **298**, 1; **294**, 519  
 Gracy, Robert W., **293**, 1566  
 Graf, Kristof, **293**, 1431; **296**, 890; **297**, 794  
 Gräfe, Michael, **293**, 1431; **296**, 890  
 Gragnaniello, Gianni, **296**, 484  
 Graham, Charles H., **297**, 294  
 Grainge, Alison, **297**, 10  
 Grammas, Paula, **293**, 710  
 Grand, Richard J., **299**, 587  
 Grano, Maria, **297**, 442  
 Grant, Maria B., **294**, 101  
 Grapengiesser, Eva, **293**, 842  
 Gräslund, A., **299**, 85  
 Grass, Gregor, **295**, 616  
 Green, Eric D., **296**, 1143  
 Green, Irene C., **298**, 350  
 Green, Justin B., **297**, 1085  
 Green, Simone R., **290**, 73  
 Greene, Deanne M., **291**, 91  
 Greenwood, Colin, **296**, 1272  
 Greer, Peter A., **297**, 294  
 Gregory, Richard J., **291**, 908  
 Grella, Melissa, **291**, 875  
 Grene, Edith, **293**, 349  
 Gressner, A.M., **295**, 330  
 Grieco, Paolo, **292**, 1075  
 Griesinger, I.B., **293**, 356  
 Griffin, Matthew D., **297**, 645  
 Griffith, Kevin L., **290**, 397; **291**, 979; **292**, 292  
 Griffiths, Helen R., **294**, 1161  
 Grigorovich, Sergei, **291**, 237  
 Grill, V., **296**, 189  
 Grillo, Caterina, **295**, 67  
 Grillo, Maria Angelica, **290**, 463  
 Grimmelikhuijzen, Cornelis J.P., **298**, 31; **299**, 628, 924  
 Grimmering, Friedrich, **291**, 1160  
 Grishin, Anatoly, **293**, 1426  
 Grober, Jacques, **291**, 286  
 Groen, Albert K., **295**, 1156  
 Groneberg, David A., **291**, 1160  
 Gronenborn, Angela M., **298**, 598  
 Grosser, Dion, **297**, 1062  
 Grosser, Nina, **290**, 1539  
 Grossman, Bruce J., **297**, 1264  
 Grosveld, G., **291**, 820  
 Grover, Philip L., **293**, 1497  
 Grüber, Gerhard, **298**, 383  
 Gruenewald, Thomas H., **290**, 1593  
 Gründker, Carsten, **291**, 680; **294**, 11  
 Grunfeld, Carl, **293**, 145; **295**, 249  
 Gryczynski, Ignacy, **294**, 886  
 Gu, J., **296**, 73  
 Gu, Jianren, **297**, 528  
 Gu, Jin-Fa, **290**, 1454  
 Gu, Lichuan, **297**, 1008  
 Gu, Qiuping, **295**, 1135  
 Gu, Shaohua, **291**, 414  
 Guan, Jian-lian, **290**, 1237  
 Guan, Yu, **296**, 1340  
 Guangyuan, Lou, **293**, 686  
 Guardiola-Diaz, H. M., **290**, 230  
 Guarnieri, C., **290**, 1010  
 Gubina, Elena, **291**, 193  
 Guérette, Benoit, **293**, 1544  
 Guérin, Bernard, **293**, 1383  
 Guerrero, Javier, **296**, 267  
 Guerrini, Marco, **292**, 222  
 Gui, Lu-Lu, **294**, 60; **299**, 173  
 Guigal, Nolwen, **297**, 249  
 Guilak, Farshid, **290**, 763  
 Guillaudeux, Thierry, **291**, 286  
 Guillaume, Christine, **290**, 1489



- Guinovart, Joan J., **297**, 841  
 Guirado, María, **291**, 574  
 Gulbins, Erich, **295**, 526  
 Gulesserian, Talin, **291**, 62  
 Gulisano, Massimo, **290**, 820  
 Gullans, Steven R., **291**, 787  
 Gulve, Eric A., **294**, 798  
 Gum, James R., Jr., **291**, 466  
 Gundelfinger, Eckart D., **296**, 827  
 Guntaka, Ramareddy V., **296**, 451  
 Günther, Christoph, **291**, 542  
 Günthert, Andreas R., **294**, 11  
 Günzburg, Walter H., **293**, 239  
 Guo, Dayong, **293**, 1412  
 Guo, Feng-Biao, **290**, 81  
 Guo, Jin, **295**, 1118  
 Guo, Junqiao, **297**, 1311  
 Guo, Li-Jun, **290**, 1199  
 Guo, Rong, **297**, 38  
 Guo, Zhongmao, **294**, 136  
 Guppy, Michael, **299**, 676  
 Gupta, Ashim K., **293**, 264  
 Gupta, Mahesh P., **294**, 791  
 Gupta, Pradeep K., **297**, 1121  
 Gupta, Seema, **293**, 338  
 Guptasarma, Purnananda, **291**, 903; **293**, 572  
 Gurr, Michael I., **292**, 1239  
 Gururaj, Anupama E., **297**, 934  
 Gurwitz, David, **295**, 102  
 Gustafsson, Jan-Åke, **293**, 1333  
 Gustafsson, Katarina, **297**, 492  
 Gustchina, Alla, **295**, 1020  
 Gutiérrez, Gisela, **293**, 1028  
 Gutiérrez, Ruth, **296**, 580  
 Gutkina, Nadezhda I., **298**, 37
- Ha, Joohun, **298**, 765  
 Ha, Seckho, **293**, 163  
 Ha, Tal Soo, **298**, 478  
 Haagsman, Henk P., **290**, 532  
 Haase, Hajo, **296**, 923  
 Haase, Hannelore, **293**, 1405  
 Habash, M.B., **299**, 634  
 Habe, Hiroshi, **296**, 233  
 Habener, Joel F., **293**, 670  
 Habinowski, Susan A., **293**, 892  
 Habu, Sonoko, **292**, 992; **298**, 420  
 Häcker, Georg, **290**, 359  
 Hada, Toshikazu, **297**, 1128  
 Haddad, John J., **291**, 1045; **293**, 252; **296**, 847; **297**, 163, 700  
 Haefliger, Jacques-Antoine, **295**, 174  
 Haenen, Guido R.M.M., **295**, 9  
 Haeseleer, Françoise, **290**, 615  
 Hafizi, Sassan, **299**, 793  
 Haga, Arayo, **293**, 192  
 Hagar, Robert E., **294**, 719  
 Hagen, Thilo, **294**, 324  
 Hagidai, Yoshimi, **296**, 544  
 Haginaka, Jun, **295**, 587  
 Hagiwara, Tamio, **293**, 120  
 Hagiwara, Teruki, **290**, 979  
 Hahm, Eunsil, **298**, 289  
 Hahm, Kyung-Soo, **290**, 204, 558; **291**, 1006; **293**, 231; **294**, 753; **295**, 591, 832; **296**, 1044; **297**, 885  
 Hahn, Tae-Ryong, **293**, 433  
 Haines, William, **295**, 849  
 Hait, William, **293**, 1073  
 Hakamata, Yoji, **294**, 470  
 Hake, Laura E., **297**, 573  
 Hakim, K., **295**, 1057  
 Halady, Prathap Kumar Shetty, **292**, 184  
 Halasz, Annamaria, **296**, 779  
 Haldar, Dipak, **296**, 1091  
 Haldosén, Lars-Arne, **296**, 139  
 Hale, John E., **293**, 207  
 Halhal, M., **295**, 336  
 Halicka, Dorota, **297**, 1311  
 Hall, Craig G., **298**, 501  
 Hall, Randy A., **297**, 565  
 Hall, William W., **293**, 1084; **294**, 509; **297**, 593  
 Halladay, David, **290**, 42  
 Hällbrink, Mattias, **291**, 945; **299**, 85  
 Halleen, Jussi M., **292**, 128  
 Hallett, Maurice B., **293**, 714  
 Halliwell, Barry, **296**, 883  
 Halpert, James R., **294**, 806  
 Halseth, Amy E., **294**, 798  
 Halvorsen, Yuan-Di C., **294**, 371  
 Ham, Claire, **299**, 62  
 Hama, Hiroshi, **291**, 838  
 Hama, Takaaki, **297**, 1253  
 Hamada, Hirofumi, **292**, 347; **293**, 174  
 Hamada, Masanori, **294**, 359  
 Hamada, Nobuyuki, **290**, 1188; **293**, 698  
 Hamada, Shigeyuki, **296**, 1329  
 Hamada, Yoshio, **291**, 775  
 Hamaguchi, Michinari, **290**, 1123  
 Hamaguchi, Youhei, **296**, 497  
 Hamamoto, Toshiro, **297**, 96  
 Hamann, Lutz, **295**, 553  
 Hamano, Yuki, **295**, 401  
 Hamaoka, Toshiyuki, **292**, 13  
 Hamasaki, Keisuke, **294**, 414  
 Hamasaki, Naotaka, **292**, 153  
 Hamasuna, Ryouichi, **290**, 1096  
 Hamatani, Ryoko, **299**, 395  
 Hambach, L., **290**, 743  
 Hamdi, Hamdi K., **295**, 668  
 Hamilton, Stephen R., **293**, 892  
 Hamman, M. Shane, **290**, 830  
 Hammet, Andrew, **293**, 892  
 Hamuro, Tsutomu, **299**, 847  
 Han, Guoxia, **292**, 1075  
 Han, Kyu Hyun, **295**, 283  
 Han, Mi-Young, **290**, 613  
 Han, Qian, **290**, 287  
 Han, Seung Jin, **290**, 35  
 Han, Wenhua, **299**, 299  
 Han, Yu, **294**, 161  
 Han, Yunqing, **291**, 605  
 Han, Zhaozhong, **292**, 1036  
 Hancox, Jules C., **292**, 208; **297**, 302  
 Handa, Makoto, **296**, 765  
 Handa, Vikas, **292**, 243  
 Handschin, Christoph, **291**, 378  
 Hanisch, Anika, **291**, 1160  
 Hano, Takuzo, **294**, 359  
 Hanoune, Jacques, **292**, 231  
 Hansen, Carl T., **294**, 1114  
 Hansen, P.J., **295**, 37  
 Hanssen-Bauer, Audun, **299**, 916  
 Hänze, Jörg, **291**, 1160  
 Hao, De-Long, **290**, 1079  
 Hapke, Gunnar, **295**, 435  
 Hara, Akio, **290**, 1042  
 Hara, Hirokazu, **296**, 182  
 Hara, Koyu, **290**, 1188; **293**, 698  
 Hara, Yoshikazu, **299**, 669  
 Harada, Mine, **298**, 450  
 Harada, Norihiro, **299**, 488  
 Harada, Rie, **292**, 709  
 Harada, Yoshinori, **291**, 48, 855  
 Haraguchi, Misako, **291**, 806  
 Harashima, Hideyoshi, **298**, 591  
 Harashima, Satoshi, **291**, 707  
 Harata, Masahiko, **299**, 328  
 Hara-Yokoyama, Miki, **299**, 663  
 Harder, David R., **296**, 677  
 Hardt, Birgit, **291**, 751  
 Hargreaves, Mark, **294**, 301  
 Harigaya, Yasuo, **292**, 571  
 Häring, Hans-Ulrich, **290**, 85; **296**, 125; **299**, 853  
 Harlan, John M., **295**, 157  
 Harmon, H. James, **296**, 1069  
 Harms-Ringdahl, Mats, **294**, 872  
 Harriott, Patrick, **290**, 1420  
 Harris, F., **290**, 427  
 Harris, Stephen E., **293**, 1412  
 Hartness, Matthew E., **291**, 332  
 Hartwich, Tobias, **297**, 737  
 Hartzell, Diane L., **291**, 701  
 Harumi, Tatsuo, **296**, 1215  
 Haruta, Hirotaka, **290**, 865  
 Harvey, Matthew, **299**, 377  
 Harvey, Patricia J., **297**, 406  
 Harwood, Adrian J., **290**, 967  
 Hasan, Quamrul, **294**, 1138  
 Hasegawa, Hideki, **293**, 1084; **294**, 509; **297**, 593  
 Hasegawa, Hiroshi, **294**, 210  
 Hasegawa, Kyoko, **291**, 17; **295**, 207  
 Hasegawa, Mamoru, **297**, 779  
 Hasegawa, Y., **295**, 255  
 Hasegawa, Yoshihisa, **298**, 785  
 Hasegawa, Yukiharu, **293**, 680  
 Hashida, Hideji, **293**, 307  
 Hashida, Mitsuru, **293**, 344  
 Hashida, Ryoichi, **297**, 1282  
 Hashim, Onn Haji, **295**, 1007  
 Hashimoto, Hisashi, **294**, 912  
 Hashimoto, Hitoshi, **297**, 427  
 Hashimoto, Inoru, **291**, 915  
 Hashimoto, Katsuyuki, **291**, 884  
 Hashimoto, Keiichi, **290**, 722  
 Hashimoto, Keitaro, **299**, 142  
 Hashimoto, Kouichi, **290**, 263  
 Hashimoto, Kouichi, **292**, 318  
 Hashimoto, Michio, **298**, 793  
 Hashimoto, Shin-ichi, **290**, 1022; **292**, 368; **297**, 17; **298**, 675  
 Hashimoto, Shu, **295**, 663  
 Hashimoto, Takamichi, **294**, 779  
 Hashimoto, Yoshihiro, **293**, 753  
 Hashimoto, Yoshinori, **290**, 213; **297**, 1302  
 Hashiramoto, Akira, **294**, 1114  
 Hasilik, Andrej, **298**, 5  
 Hasimu, Buaijaer, **297**, 1135  
 Haslam, Richard J., **293**, 640  
 Hasselgren, Per-Olof, **290**, 1, 469; **296**, 41  
 Hassing, Heide, **294**, 88  
 Hasumi, Hideyo, **295**, 193  
 Hata, Hiroaki, **296**, 530  
 Hata, Jun-ichi, **292**, 138; **293**, 61  
 Hata, Mitsumi, **290**, 756  
 Hatae, Noriyuki, **290**, 162  
 Hatanaka, Hiroshi, **294**, 268, 1087  
 Hatanaka, Takahiro, **291**, 291  
 Hatanaka, Yasumaru, **295**, 587  
 Hatano, Masahiko, **292**, 121  
 Hatano, Naoya, **292**, 13  
 Hatch, Duane, **298**, 257  
 Hatic, Safet O., II, **292**, 463  
 Hatta, Mitsutoki, **298**, 240  
 Hatta-Ohashi, Yoko, **296**, 194  
 Hattori, Chinatsu, **293**, 1228  
 Hattori, Fumiyuki, **292**, 642  
 Hattori, Hiroaki, **290**, 713; **293**, 1007  
 Hattori, Masanori, **294**, 363  
 Hattori, Naka, **290**, 701  
 Hattori, Shunji, **294**, 429  
 Hattori, Takako, **299**, 755  
 Hattori, Toshio, **297**, 625  
 Hattori, Yukio, **293**, 542  
 Hatzistavrou, T., **291**, 191  
 Hauge-Evans, Astrid C., **296**, 589  
 Hauger, Richard L., **298**, 303  
 Hauser, Frank, **299**, 628, 924  
 Haussler, Carol A., **299**, 730  
 Haussler, Mark R., **299**, 730  
 Hawari, Jalal, **296**, 779  
 Hayakawa, Takao, **297**, 779  
 Hayakawa, Taro, **296**, 201  
 Hayakawa, Yoichi, **298**, 178  
 Hayasawa, Hirotoshi, **296**, 1215  
 Hayashi, Daisuke, **294**, 770  
 Hayashi, Doubun, **298**, 493  
 Hayashi, Izumi, **294**, 423, 441  
 Hayashi, Jun-Ichi, **297**, 346  
 Hayashi, Kenji, **290**, 131  
 Hayashi, Kenshi, **298**, 450  
 Hayashi, Kiyoshi, **296**, 78  
 Hayashi, Masaaki, **297**, 1253  
 Hayashi, Masahiko, **291**, 1065  
 Hayashi, Matsuhiko, **290**, 1275  
 Hayashi, Nobuhiro R., **290**, 1434  
 Hayashi, Reiko, **298**, 785  
 Hayashi, Shigeki, **295**, 319  
 Hayashi, Takeharu, **291**, 385  
 Hayashi, Yokichi, **296**, 1215  
 Hayashi, Yoshitaka, **299**, 498  
 Hayashida, Kentaro, **296**, 274

- Hayashizaki, Yoshihide, **290**, 1108, 1499; **296**, 497
- Hayden, Michael R., **290**, 713
- Hayton, William L., **295**, 1125
- Hazai, Eszter, **291**, 1089
- Hazeki, Noriko, **294**, 429
- Hazeki, Osamu, **292**, 642
- He, Fuchu, **290**, 1411
- He, Hua, **293**, 1191
- He, Junqi, **297**, 565
- He, Ming-Liang, **290**, 737; **295**, 1102; **297**, 185; **299**, 723
- He, Wei Song, **296**, 111; **299**, 832
- He, Xianghuo, **297**, 528
- Healy, Patricia, **299**, 659
- Heart, Emma, **292**, 308
- Hébert, Marie-Jos, **291**, 261
- Hedengran Faulds, Malin A., **296**, 139
- Heim, Markus, **292**, 841
- Heimark, Douglas B., **293**, 1092; **295**, 561
- Hein, Christian, **294**, 496
- Heinisch, Jürgen J., **295**, 992
- Heinke, P., **290**, 443
- Heise, Kerstin, **296**, 1026
- Heiwa, Okuda, **295**, 657
- Heizmann, Claus W., **292**, 1044; **299**, 857
- Helbing, Grit, **295**, 423
- Helleday, Thomas, **296**, 363
- Hellman, Bo, **293**, 842
- Hellman, Ulf, **296**, 1310
- Hellstrom, Wayne J.G., **298**, 427
- Helmkamp, George M., Jr, **292**, 1251
- Hembree, Mark J., **293**, 691
- Hemmi, Hisashi, **297**, 1096
- Henault, Martin, **292**, 601
- Henderson, James, **298**, 257
- Henderson, Lou, **296**, 1228
- Hendrick, Alan G., **292**, 909; **299**, 770
- Hendrix, Mary J.C., **295**, 800
- Hengstler, J.G., **294**, 1052
- Hennige, Anita M., **290**, 85
- Henriksson, Marie, **290**, 11
- Henriksson, Mikael, **295**, 1035
- Henrique-Silva, F., **296**, 1194
- Henry, Joël, **296**, 1186
- Hens, Mark D., **298**, 364
- Hentsch, Bernd, **293**, 1377
- Hentschke, Moritz, **299**, 872
- Herbert, Brian, **295**, 107
- Herbert, Jean-Marc, **295**, 428
- Herd, Laura M., **298**, 169
- Herder, Christian, **294**, 592
- Hermanowski-Vosatka, Anne, **294**, 88
- Hermonen, Jorma, **290**, 146
- Hernandez, Hector, **299**, 818
- Herrmann, Ralf, **291**, 1283
- Hershko, Dan D., **290**, 469
- Hertzog, P., **291**, 191
- Hesselager, G., **290**, 349
- Hetényi, Csaba, **292**, 931
- Hetzer, Roland, **298**, 116
- Heutink, Peter, **292**, 58
- Heymann, D., **293**, 38
- Heyns, Walter, **295**, 469
- Hibino, Mitsunobu, **293**, 753
- Hibino, T., **297**, 722
- Hicks, James W., **291**, 466
- Hicok, Kevin C., **294**, 371
- Hida, Ayumi, **296**, 26
- Hidajat, Rachmat, **299**, 366
- Hieda, Michinari, **294**, 714
- Higa, Moritake, **291**, 675
- Higa, Sayomi, **297**, 1344
- Higa, Teruo, **296**, 1148
- Higashinagawa, Toru, **291**, 245, 508; **294**, 456
- Higashio, Hironori, **296**, 568
- Higuchi, Chikahisa, **299**, 903
- Higuchi, Jun, **294**, 280
- Hijikata, Makoto, **293**, 993
- Hildebrandt, A., **294**, 1052
- Hill, Jamal, **291**, 692
- Hillenbrand, Bernd, **298**, 657
- Hillig, Thore, **298**, 309
- Hillsley, Mechteld V., **293**, 1466
- Hinagata, Jun-ichi, **290**, 858
- Hinde, A.K., **297**, 302
- Hinderlich, Stephan, **294**, 650
- Hinke, Simon A., **291**, 1302; **296**, 229
- Hino, Satoshi, **292**, 957
- Hinoi, Eiichi, **293**, 1445; **294**, 1177; **297**, 452
- Hintz, Oliver, **296**, 890
- Hinuma, Shuji, **293**, 396
- Hirabayasi, Yoshio, **294**, 363
- Hirai, Hisamaru, **291**, 775; **294**, 635; **299**, 116
- Hirai, Takao, **292**, 200
- Hirai, Yasuo, **296**, 102
- Hiraishi, Sayuri, **298**, 468
- Hiraiwa, Noriko, **290**, 1220
- Hiraiwa, Yukiko, **290**, 1123
- Hirakawa, Yoji, **290**, 909
- Hirano, Hisashi, **290**, 979
- Hirano, Ken-ichi, **290**, 713; **296**, 625
- Hirano, Michio, **293**, 521
- Hirano, Satoko, **297**, 368
- Hirano, Takeshi, **297**, 924
- Hirao, Atsushi, **294**, 630
- Hiraoka, Hisatoyo, **290**, 713; **296**, 625
- Hirasawa, Akira, **296**, 85, 544; **299**, 142
- Hirata, Aiko, **291**, 205
- Hirata, Fusao, **291**, 205
- Hirata, Kazumasa, **293**, 653
- Hirata, Yasunobu, **297**, 1058
- Hirata, Yoshihiro, **291**, 868
- Hiratuka, Yuichi, **299**, 825
- Hirayama, Ryu, **294**, 46
- Hirayanagi, Nayumi, **293**, 653
- Hiroaki, Yoko, **295**, 756
- Hiroe, Michiaki, **291**, 385
- Hirohashi, Noritaka, **296**, 833; **298**, 403
- Hiroi, Yukio, **298**, 493
- Hirokawa, Noriko, **290**, 482
- Hiromasa, Takahide, **293**, 225
- Hirooka, Hiroko, **299**, 183
- Hirosawa, Shinsaku, **291**, 567
- Hirose, Hideki, **292**, 355
- Hirose, Keiko, **299**, 825
- Hirose, Minako, **291**, 55; **297**, 323; **298**, 10
- Hirota, Takeshi, **299**, 472
- Hirotani, Mutsumi, **297**, 32
- Hirvonen, Sirpa J., **291**, 897
- Hisada, Miki, **291**, 1187
- Hisatomi, Hisashi, **297**, 59
- Hiscock, Natalie, **296**, 1264
- Hiscox, Stephen, **293**, 714
- Hishita, Terutoshi, **297**, 664
- Hitchcock-DeGregori, Sarah, **296**, 300
- Hitomi, Tomohiro, **294**, 1109
- Hiura, Hitoshi, **297**, 323
- Hiwada, Kunio, **290**, 1255
- Hiwasa, Takaki, **290**, 510
- Hiwatashi, Yusuke, **298**, 793
- Hlaváček, Jan, **290**, 790
- Ho, Hao-Chung, **292**, 79
- Ho, Jenny J.L., **294**, 680
- Ho, Joseph X., **291**, 813
- Ho, Lien, **297**, 1062
- Ho, Nancy W.Y., **298**, 603
- Ho, Paulo Lee, **294**, 879; **298**, 638
- Ho, Tamara T., **290**, 921
- Hoang, T.A., **299**, 634
- Hoareau, Rachel, **291**, 332
- Hobbs, Errett C., **293**, 1168
- Hochner, Hagit, **294**, 1169
- Hodge, David R., **292**, 287
- Hoe, Kwang-Lae, **290**, 613
- Hoekstra, Dick, **295**, 636
- Hoelzer, Dieter, **292**, 937; **293**, 182
- Hofbauer, Lorenz C., **291**, 680
- Hofbauerová, Kateřina, **297**, 154
- Hoffman, Sara, **296**, 1171
- Hoffmann, E., **290**, 318
- Hoffmann, Torsten, **291**, 1302
- Hofman, Kurt, **295**, 469
- Hofmann, Andreas, **291**, 875
- Hofmann, Ulrich, **298**, 163
- Hoggard, Nigel, **299**, 432
- Hohda, Shigeru, **291**, 385
- Hoheisel, Jörg D., **293**, 1377
- Hohenadl, Christine, **293**, 239
- Holden, Darren, **297**, 71
- Holk, André, **293**, 766
- Holland, E., **291**, 820
- Holland, James F., **290**, 249
- Hollander, Gideon, **290**, 1376
- Hollmann, Kirsten, **294**, 11
- Hollosi, M., **293**, 18
- Holly, J.M.P., **294**, 988, 995
- Holm, Cecilia, **291**, 286
- Holmgren, Arne, **295**, 1046
- Holmgren, Paul, **295**, 689
- Holm Nielsen, Ellen, **294**, 309
- Holst, Jens J., **294**, 1
- Holst, Lena Stenson, **291**, 286
- Holt, Robert G., **298**, 75
- Holter, Elin, **293**, 1333
- Holtz, J., **295**, 1057
- Home, Will, **296**, 618
- Homma, Kazuaki, **290**, 311; **292**, 300
- Honda, Hiroaki, **294**, 635
- Honda, Katsuya, **297**, 341
- Honda, Kazuki, **290**, 1237
- Honda, Kenji, **293**, 686
- Honda, Naoko, **292**, 355
- Honda, Sayaka, **294**, 470
- Honda, Tomoyuki, **293**, 45
- Honda, Yoichi, **297**, 918
- Hong, Eva, **296**, 962
- Hong, Feng, **298**, 765
- Hong, Huang Shan, **296**, 883
- Hong, Jong Chan, **290**, 457
- Hong, Seung Hwan, **290**, 35
- Hong, S.H., **296**, 293
- Hong, Soon Won, **296**, 1356
- Hong, Sung-Jong, **296**, 1238
- Hong, Sung-Yu, **293**, 530
- Hong, Su Young, **291**, 425
- Honke, Koichi, **292**, 83
- Honma, Takao, **298**, 793
- Honoré, Eric, **292**, 339
- Hood, Kristin L., **298**, 545
- Hoogduijn, Martin J., **290**, 844; **296**, 698
- Hopkin, Julian M., **292**, 776
- Hordejuk, Renata, **294**, 1144
- Hori, Makoto, **290**, 213
- Horie, Kuniko, **299**, 222
- Horie, Shuichi, **298**, 468
- Horie, Takashi, **295**, 663
- Horiguchi, Hyogo, **291**, 354
- Horikawa, Chika, **290**, 1478
- Horio, Takekazu, **295**, 163
- Horiuchi, Hiroyuki, **294**, 1071; **298**, 103
- Horiuchi, Seikoh, **296**, 32
- Horiuchi, Takahiko, **298**, 450
- Horjales, Eduardo, **295**, 828
- Horn, Jamie, **290**, 275
- Horne, Andrew W., **292**, 102
- Hörnle, Claudia, **291**, 146
- Horváth, Ibolya, **290**, 1535
- Hosaka, Masahiro, **293**, 993
- Hosaka, Taisuke, **295**, 354
- Hoshi, Sachi, **290**, 177
- Hoshi, Sakuo, **290**, 1139
- Hoshikawa, Hajime, **299**, 91
- Hoshino, Mitsunobu, **295**, 651
- Hoshino, Shigetaka, **292**, 992
- Hosoda, Toru, **298**, 493
- Hosogane, Naobumi, **297**, 1332
- Hosoi, Toru, **294**, 215
- Hosoi, Yoshio, **296**, 62
- Hosokawa, Toshiyuki, **297**, 517
- Hosono, Takayoshi, **292**, 675
- Hossain, Khaled, **292**, 826
- Hosur, M.V., **294**, 395
- Hosur, Ramakrishna V., **293**, 427; **294**, 395
- Hotchkiss, Sharon A., **297**, 65
- Hotoda, Nika, **293**, 800
- Hotta, Hak, **299**, 366
- Houdebine, Louis-Marie, **290**, 53



- Hough, Emma, **294**, 191  
Houlston, Rebecca A., **290**, 1470; **294**, 1001  
Howard, Daniel, **299**, 208  
Howard, J.K., **295**, 475  
Howdle, Steven M., **292**, 144; **299**, 208  
Howe, W. Jeffrey, **292**, 702  
Howlader, Zakir H., **291**, 758  
Hozumi, Nobumichi, **299**, 148  
Hrboticky, Nina, **290**, 988  
Hricovini, Miloš, **292**, 222  
Hruby, Victor J., **292**, 1075  
Hsiang, Chien-Yun, **293**, 1301  
Hsiao, Li-Li, **291**, 787  
Hsiao, Yi-Min, **295**, 43  
Hsieh, Jer-Tsong, **298**, 805  
Hsieh, Shih-Yang, **299**, 613  
Hsieh, Tze-chen, **297**, 1311  
Hsu, Chih-Chieh, **291**, 165  
Hsu, Chuan-Long, **297**, 282  
Hsu, C. Susan, **293**, 705  
Hsu, Wen-Hwei, **297**, 282  
Hsueh, Willa A., **297**, 794  
Hu, Dahai, **296**, 463; **297**, 729  
Hu, Guo-fu, **294**, 287  
Hu, Hui-Yu, **297**, 282  
Hu, Qinghua, **292**, 325  
Hu, Qin-xue, **292**, 449  
Hu, Tao, **293**, 958  
Hu, Teh-Min, **295**, 1125  
Hu, Xiao-Xue, **295**, 182  
Hu, Zhi-Bi, **293**, 979  
Hu, Zhijun, **299**, 880  
Hua, Ping, **295**, 223  
Huang, Chang-Jen, **299**, 241  
Huang, Cheng-Yang, **297**, 1027  
Huang, Chunxia, **295**, 862; **299**, 542  
Huang, Dah-Yeou, **290**, 955  
Huang, Fan-Yen, **296**, 710  
Huang, Haimei, **293**, 298  
Huang, Hsien-bin, **291**, 1293; **294**, 574  
Huang, Jin-ding, **291**, 270  
Huang, Jinhong, **294**, 635  
Huang, Lin, **297**, 17  
Huang, Paul Lee, **292**, 441  
Huang, Paul L., **294**, 1030  
Huang, Philip Lin, **292**, 441  
Huang, Qingshan, **291**, 414  
Huang, Shau-Ku, **291**, 111  
Huang, Wei, **291**, 291; **292**, 860  
Huang, Xiu-Ying, **290**, 613  
Huang, Zhi, **292**, 812  
Huang, Ji-Tao, **294**, 621  
Hucho, Ferdinand, **291**, 421  
Hudson, Richard A., **299**, 659  
Hudson, Sherry A., **291**, 111  
Huestis, Wray H., **296**, 1352  
Huff, J.L., **293**, 1000; **294**, 1017  
Hug, Hubert, **297**, 148  
Hughes, A.D., **290**, 1246  
Huh, Nam-ho, **294**, 843; **298**, 24  
Huh, Tae-Lin, **292**, 542  
Hui, Rutai, **293**, 1396; **294**, 161  
Hulkko, Sanna M., **295**, 749  
Hultenby, Kjell, **295**, 766  
Hume, David A., **291**, 1071  
Hummel, Manfred, **298**, 116  
Hung, Chih-Hsin, **291**, 338  
Hung, Chih-Hang, **295**, 167  
Hungness, Eric S., **290**, 469  
Hunziker, Peter, **292**, 1044  
Huo, Keke, **297**, 528  
Huoponen, Kirsi, **291**, 1173  
Hupke, Michael A., **292**, 987  
Hurley, M. M., **290**, 526  
Hurst, Douglas R., **293**, 478  
Hurst, William J., **292**, 20; **298**, 133  
Husain, Shahid, **297**, 1102  
Hutchings, Helen, **294**, 764  
Hütter, Joachim, **296**, 343  
Huwiler, Andrea, **298**, 408  
Huybrechts, Jurgén, **296**, 1112  
Huybrechts, Roger, **297**, 1140  
Hwang, Byoung-hoon, **290**, 656  
Hwang, Daniel H., **298**, 667  
Hwang, Kyu-Kye, **293**, 1217  
Hwang, Oksun, **293**, 733  
Hwang, Pyoung Han, **294**, 480  
Hwang, Sang-Gu, **296**, 221  
Hwang, Tae Sook, **296**, 337  
Hwang, T.H., **296**, 293  
Hwang, Tzann-Shun, **295**, 167  
Hwang, Yoo-Seok, **292**, 1081; **298**, 815  
Hwang, Young Il, **298**, 289  
Hylemon, Phillip B., **293**, 338  
Iani, Vladimir, **297**, 468  
Iberg, Niggi, **297**, 261  
Ibrahim, J., **293**, 924  
Ichihashi, Masamitsu, **294**, 1109  
Ichikawa, Atsushi, **290**, 162, 696; **292**, 675; **297**, 1205; **298**, 398  
Ichikawa, Hitoshi, **290**, 403  
Ichikawa, Minoru, **294**, 1151  
Ichikawa, Tatsuki, **294**, 414  
Ichikawa, Yasushi, **296**, 497  
Ichimura, Sachiko, **293**, 120  
Ichinose, Hiroshi, **293**, 962  
Ichinose, M., **295**, 630  
Ichinose, Sachiyo, **295**, 112  
Ichiyama, Satoshi, **297**, 664  
Ida, Hiroaki, **296**, 26  
Ide, Kazuki, **296**, 194  
Idell, Steven, **292**, 184  
Igarashi, Kazuei, **299**, 252  
Igarashi, Masato, **291**, 210  
Igarashi, Yasuo, **290**, 1434; **292**, 280  
Igawa, Mikio, **296**, 820  
Iglesias-de la Cruz, M. Carmen, **291**, 1356  
Ignatova, Zoya, **291**, 146  
Ihara, Yoshito, **297**, 353  
Iida, Toshiya, **294**, 1071  
Iijima, Kousuke, **291**, 1065  
Imura, Tadahi, **299**, 395  
Ino, Yukio, **293**, 945  
Iizaka, Masayoshi, **292**, 498  
Ijiri, Kosei, **297**, 1238  
Ikai, Kohichi, **290**, 696  
Ikari, Akira, **294**, 710  
Ikawa, Yoshiya, **291**, 1225  
Ike, Hideyuki, **296**, 497  
Ikebe, Chiho, **290**, 1399  
Ikebe, Mitsuo, **290**, 311; **292**, 300; **297**, 773  
Ikebe, Reiko, **290**, 311  
Ikeda, Hitoshi, **290**, 898; **297**, 1108; **299**, 483  
Ikeda, Kazuhiro, **291**, 354; **299**, 222  
Ikeda, Kyoji, **299**, 863  
Ikeda, Masaaki, **290**, 933  
Ikeda, Masaki, **292**, 571  
Ikeda, Masa-Aki, **296**, 274  
Ikeda, Mitsuru, **291**, 669  
Ikeda, Ryuji, **291**, 806; **295**, 300  
Ikeda, Satoshi, **296**, 32  
Ikeda, Shinobu, **296**, 395  
Ikeda, Shogo, **296**, 785  
Ikeda, Shoko, **293**, 421  
Ikeda, Takumi, **293**, 1530  
Ikeda, Yasuo, **296**, 765  
Ikeda, Yoshio, **292**, 571  
Ikeda, Yoshitaka, **296**, 54  
Ikegami, Chiaki, **290**, 713; **296**, 625  
Ikegami, Takashi, **296**, 729  
Ikeharu, Susumu, **291**, 68  
Ikejima, Kenichi, **291**, 55; **298**, 10  
Ikemoto, Noriaki, **291**, 1102  
Ikemoto, Takaaki, **293**, 1265  
Ikeyama, Takanari, **292**, 826  
Ilouz, Ronit, **295**, 102  
Im, Dae-Seong, **296**, 221  
Im, Hyung-Min, **299**, 102  
Im, Mie-Jae, **293**, 383  
Im, Ryang Hyock, **297**, 323  
Im, Young-Hyuck, **292**, 383  
Imai, Hiroo, **294**, 205  
Imai, Jun-ichi, **293**, 470  
Imai, Keita, **296**, 305  
Imai, Kenichi, **291**, 890  
Imai, Masashi, **291**, 278; **294**, 630; **298**, 41  
Imai, Ryozi, **298**, 46  
Imai, Shinjiro, **296**, 1286  
Imai, Yoichi, **299**, 116  
Imai, Yukiho, **297**, 1282  
Imaizumi, Kazunori, **296**, 313  
Imaizumi, Tadaatsu, **292**, 274  
Imaizumi, Tsutomu, **291**, 385  
Imakiire, Takayuki, **290**, 1551  
Imamoto, Akira, **291**, 744  
Imamura, Kazuhiro, **290**, 263  
Imamura, Takahisa, **294**, 423  
Imamura, Toru, **290**, 169  
Imanaka, Tadayuki, **295**, 508  
Imanaka, Tsuneo, **291**, 1245  
Imanishi, Hiroyasu, **297**, 1128  
Imanishi, Jiro, **291**, 48; **293**, 1530  
Imanishi, Takeshi, **290**, 858  
Imanishi, Yoshikazu, **290**, 615  
Imazeki, Nobuo, **296**, 54  
Imoto, Taiji, **299**, 42  
Inaba, Kazuo, **297**, 800  
Inaba, Tadanobu, **298**, 433  
Inada, Tomohisa, **293**, 1124  
Inadera, Hidekuni, **292**, 368; **298**, 675; **294**, 602  
Inagaki, Hidehito, **293**, 962  
Inagaki, Maiko, **293**, 45  
Inagaki, Naoki, **292**, 689  
Inagaki, Shinobu, **297**, 32  
Inagaki, Yosuke, **290**, 973; **296**, 877; **297**, 419; **299**, 183  
Inagami, Tadashi, **292**, 362; **294**, 1023  
Inanami, Osamu, **293**, 1571  
Inanobe, Atsushi, **296**, 523  
Inatomi, A., **297**, 722  
Inatomi, Nobuhiro, **293**, 396  
Ingber, Donald E., **290**, 749  
Ingelfinger, Julie R., **291**, 787  
Ingram, Vernon M., **293**, 1197, 1204  
Inohara, Keiji, **294**, 456  
Inoko, Hidetoshi, **297**, 1171  
Inokuchi, Hachiro, **297**, 779  
Inokuchi, Akira, **294**, 734  
Inoue, Akira, **292**, 300  
Inoue, Hidekazu, **297**, 59  
Inoue, Hitoshi, **294**, 456  
Inoue, Ikuro, **290**, 131  
Inoue, Kaori, **291**, 124  
Inoue, Katsuhisa, **299**, 465  
Inoue, Kazuaki, **293**, 969  
Inoue, Kazuhide, **291**, 124  
Inoue, Masao, **296**, 651  
Inoue, Satoshi, **299**, 222  
Inoue, Takafumi, **299**, 857  
Inoue, Takashi, **298**, 779  
Inoue, Tan, **291**, 1225  
Inoue, Tomohisa, **290**, 475  
Inoue, Tsutomu, **297**, 255  
Inoue, Yukiko, **297**, 1108  
Inukai, Kouichi, **299**, 291  
Inuzuka, Sawako, **294**, 1121  
Iovanna, Juan Lucio, **290**, 641; **297**, 607  
Irahara, Minoru, **290**, 1349  
Irie, Kazuhiro, **294**, 5; **295**, 306  
Irie, Kenji, **293**, 45; **299**, 472  
Irie, Naoki, **298**, 738  
Ironside, James W., **294**, 280  
Iruela-Arispe, M. Luisa, **293**, 501  
Irwin, William A., **291**, 215; **292**, 787  
Ise, Tomoko, **295**, 945  
Isenberg, Gerhard, **295**, 636  
Ishibashi, Kenichi, **291**, 278; **294**, 630; **298**, 41  
Ishibashi, Teruo, **292**, 1293  
Ishibashi, Yoshihiro, **293**, 396  
Ishida, Norio, **298**, 198  
Ishida, Seichi, **296**, 172  
Ishida, Takafumi, **295**, 644  
Ishida, Takehiko, **295**, 230  
Ishida, Toshimasa, **294**, 210  
Ishida, Yukisato, **290**, 1037  
Ishida, Yumiko, **294**, 1101  
Ishidao, Takefumi, **294**, 1151  
Ishido, Keinosuke, **293**, 220



- Ishigami, Masato, **290**, 713; **296**, 625
- Ishigatsubo, Yoshiaki, **297**, 1324
- Ishiguchi, Hiroshi, **295**, 945
- Ishiguro, Naoki, **293**, 680
- Ishihama, Akira, **299**, 252
- Ishihara, Mitsuaki, **290**, 713
- Ishii, Masaharu, **292**, 280
- Ishii, Michiaki, **291**, 855
- Ishii, Nobuko, **294**, 414
- Ishii, Rina, **297**, 323
- Ishikawa, Akira, **291**, 623
- Ishikawa, Fuyuki, **296**, 1372
- Ishikawa, Hajime, **292**, 263
- Ishikawa, Hiroki, **294**, 414
- Ishikawa, Kazuhiko, **290**, 994
- Ishikawa, Takashi, **296**, 497
- Ishikawa, Takashi, **298**, 646
- Ishikawa, Toshihisa, **299**, 410
- Ishikawa, Yuko, **295**, 207
- Ishino, Fumitoshi, **290**, 403
- Ishitsuka, Kenji, **291**, 806
- Ishiura, Shoichi, **293**, 800, 1228
- Ishiwata, Shin'ichi, **293**, 1550
- Ishiyama, Yuichiro, **293**, 741
- Ishizaki-Koizumi, Sonoko, **291**, 738
- Ishizuka, Masaaki, **298**, 178
- Ishizuka, Tomoki, **296**, 152
- Islam, Khalid B., **298**, 505
- Islam, Tahmina C., **293**, 1319
- Isobe, Ken-Ichi, **295**, 187
- Isobe, Minoru, **293**, 874
- Isobe, Toshiaki, **290**, 948
- Isola, E.L.D., **291**, 516
- Isomoto, Hajime, **296**, 1251
- Isono, Kyo-ichi, **296**, 729
- Isono, Motohide, **296**, 1356
- Issaq, Haleem J., **290**, 885; **292**, 587
- Itadani, Hiraku, **298**, 714
- Itakura, Mitsuo, **292**, 138; **293**, 247
- Ito, Hiromichi, **293**, 391
- Ito, Hiroshi, **296**, 274
- Ito, Jun-Itu, **293**, 150
- Ito, Makoto, **299**, 160
- Ito, Masafumi, **295**, 261
- Ito, Michiko, **291**, 758
- Ito, Mitsuhiro, **298**, 87
- Ito, Seiji, **291**, 884; **298**, 345
- Ito, Takayasu, **293**, 680
- Ito, Takeshi, **297**, 59
- Ito, Tomomi, **290**, 1048
- Itoh, Fumiaki, **290**, 131
- Itoh, Hideaki, **295**, 945
- Itoh, Hiroshi, **290**, 1096; **296**, 85
- Itoh, Kazuyuki, **299**, 903
- Itoh, Masayuki, **295**, 112
- Itoh-Satoh, Manatsu, **291**, 385
- Itohara, Shigeyoshi, **294**, 280
- Itoman, Moritoshi, **294**, 441
- Iuliano, Rodolfo, **290**, 942
- Iversen, Annette, **299**, 628, 924
- Iwafune, Mito, **293**, 220; **297**, 1167
- Iwahashi, Hitoshi, **294**, 1009; **295**, 1041
- Iwahashi, Jun, **290**, 1188; **293**, 698
- Iwahashi, Naoko, **290**, 409; **294**, 642
- Iwai, Kenji, **290**, 225
- Iwai, Masaki, **291**, 48, 855
- Iwai, Naoharu, **296**, 537
- Iwai, Yuka, **297**, 323
- Iwaki, Mitsuhiro, **290**, 311
- Iwakoshi, Eiko, **291**, 1187
- Iwamoto, Yasuhiko, **292**, 8
- Iwanaga, Setsuko, **294**, 760
- Iwanaga, Toshihiko, **296**, 145
- Iwane, Atsuko Hikikoshi, **290**, 311
- Iwasaki, Akio, **293**, 542
- Iwasaki, Atara, **297**, 1128
- Iwasaki, Naoko, **292**, 8
- Iwasaki, Tadao, **293**, 1007
- Iwasaki, Toshiharu, **299**, 384
- Iwata, Hisashi, **293**, 680
- Iwata, Kazushi, **296**, 201
- Iwata, Kumi, **291**, 554
- Iwata, Nobuko, **298**, 87
- Iwatsubo, Takeshi, **294**, 429
- Iwura, Takafumi, **299**, 42
- Izawa, Tetsuya, **295**, 236
- Izquierdo, Dolores, **297**, 841
- Izumi, Hiroto, **295**, 945
- Izumi, Shotaro, **292**, 513
- Jackowski, Suzanne, **292**, 1155
- Jackson, Alan D., **292**, 216
- Jackson, Carl W., **292**, 916
- Jackson, Desmond, **298**, 474
- Jackson, Torrance, **296**, 1143
- Jacquemin, Patrick, **292**, 848
- Jadot, Michel, **296**, 1180
- Jafri, Farahdiba, **297**, 1102
- Jagannadham, M.V., **290**, 1441; **298**, 203
- Jäggin, Verena, **298**, 54
- Jahng, Kwang Yeop, **296**, 401
- Jain, Rakesh K., **299**, 404
- Jain, Vikas, **298**, 247
- Jalkanen, Markku, **290**, 146
- James, Karen, **294**, 180
- James, Stuart, **299**, 273
- James, W., **293**, 924
- Jameson, J. Larry, **295**, 261
- Janetzky, Bernd, **290**, 1593
- Jang, Ho Hee, **296**, 1152
- Jang, Jeun Kyu, **294**, 1184
- Jang, Ju-Hyeog, **292**, 378
- Jang, Jun-Hyeog, **295**, 898
- Jang, Moon Kyoo, **293**, 375
- Jang, Moon-Sun, **295**, 495
- Jang, Myoung-Ho, **297**, 329
- Jang, Myung Ho, **295**, 283
- Jang, Sung Key, **290**, 105; **297**, 224
- Jang, Yeun Kyu, **295**, 970
- Jang, Yong-Suk, **291**, 139
- Jang, Young-Joo, **290**, 613
- Jänne, Olli A., **291**, 897
- Jansen, Hans, **296**, 1051
- Janssen, Hans, **291**, 844
- Jansson, John-Olov, **293**, 560
- Jardine, Alan G., **290**, 438
- Jarvet, J., **299**, 85
- Jaśkiewicz, Anna, **292**, 855
- Jaubert, Anne-Marie, **291**, 394
- Javitch, Jonathan A., **290**, 1545
- Javitt, Norman B., **292**, 1147
- Jayaswal, Radheshyam K., **290**, 62
- Jean-Baptiste, Véronique, **298**, 185
- Je, Changhoon, **293**, 1295
- Jeffrey, Martin, **291**, 372
- Jégou, Bernard, **291**, 286
- Jekle, Andreas, **295**, 526
- Jemnitz, Katalin, **291**, 29
- Jen, Ling-Sun, **296**, 1148
- Jeng, Hao-Hsuan, **291**, 1293
- Jenner, Andrew, **296**, 883
- Jennings, Therese M., **293**, 1354
- Jensen, Kim Bak, **298**, 566
- Jensen, O., **294**, 1052
- Jensen, Roderick V., **291**, 787
- Jeon, Jongrye, **298**, 613
- Jeon, Ju-Hong, **294**, 818
- Jeon, Junho, **298**, 289
- Jeon, Sung-Jong, **295**, 508
- Jeon, Young Jin, **294**, 753
- Jeong, Dae-won, **293**, 1248; **294**, 1130
- Jeong, Dong Tak, **298**, 392
- Jeong, Han-Seung, **298**, 216
- Jeong, Hye Gwang, **294**, 753; **297**, 885
- Jeong, Jeongmi Kim, **299**, 102
- Jeong, Sunjoo, **291**, 925
- Jeong, Yeontae, **290**, 730
- Jeoung, Doo-Il, **292**, 715; **295**, 119; **299**, 549
- Jerala, Roman, **292**, 880
- Jess, Urda, **294**, 272
- Jeun, Sin-Soo, **296**, 1295
- Jhee, Eun-Chung, **290**, 1090
- Jhun, Byung H., **291**, 1239
- Ji, Li Li, **296**, 54
- Ji, Shengjian, **296**, 1245
- Ji, Yon Ju, **293**, 1295
- Jia, Zhen, **297**, 206
- Jiang, Canwen, **291**, 908
- Jiang, Long, **295**, 14
- Jiang, Ming-Chung, **294**, 900
- Jiang, Shibo, **298**, 552
- Jiang, Tao, **297**, 1088
- Jiang, Yongfeng, **290**, 641
- Jiang, Zhongjian, **294**, 726
- Jiao, Wei, **299**, 542, 606
- Jin, Dadao, **297**, 185
- Jin, Ding J., **290**, 1183; **291**, 431
- Jin, Dong-Yan, **294**, 120
- Jin, Shenchu, **297**, 545
- Jin, Yan, **294**, 695
- Jincho, Yuko, **297**, 323
- Jing, N., **293**, 167
- Jinno, Hideto, **296**, 172
- Jinno, Norimasa, **293**, 554
- Jippo, Tomoko, **290**, 1250; **297**, 111
- Jishage, Kou-ichi, **298**, 87
- Jitrapakdee, Sarawut, **295**, 387
- Jo, Chang, **299**, 659
- Jo, Inho, **292**, 1010; **299**, 102
- Jo, Sangmee Ahn, **299**, 102
- Jo, Seung-Hee, **292**, 542
- Jochum, Marianne, **291**, 635
- Joguchi, Atsuhiko, **293**, 293
- Johansen, Berit, **290**, 988
- Johansson, Catrine, **295**, 1046
- Johansson, Jan, **295**, 1035
- Johansson, Magnus, **291**, 367
- John, Joseph Abraham Christopher, **291**, 798
- Johnson, Alan L., **291**, 226
- Johnson, Brad, **291**, 1119
- Johnson, Jody K., **290**, 287
- Johnson, Lindsey M., **290**, 1267
- Johnson, William W., **297**, 412
- Johnston, Stephen Albert, **296**, 991
- Jolivet, Geneviève, **290**, 53
- Jomori, Takahito, **299**, 183
- Jonat, Walter, **297**, 125
- Jones, Gareth W., **299**, 438
- Jones, J., **290**, 318
- Jones, Jared P., **292**, 409
- Jones, Malcolm N., **297**, 71
- Jones, Micheala N., **298**, 75
- Jones, Peter M., **296**, 589
- Jong, Hyun-Soon, **292**, 383
- Jongsma, Habo J., **292**, 71
- Joost, H.G., **292**, 113
- Jörnvall, Hans, **295**, 1035
- José, M.V., **299**, 126
- Jose, Powell O., **298**, 824
- Joseph, Troy, **298**, 474
- Jostarndt, Kristina, **290**, 988
- Jouan, Alain, **294**, 16
- Jouanneau, J., **294**, 108
- Jourdheuil-Rahmani, Dominique, **292**, 390
- Joyce, Charles, **295**, 276
- Judd, Robert L., **296**, 383
- Juji, Takeo, **296**, 194
- Julian, JoAnne, **293**, 1183
- Juliano, L., **290**, 494
- Juliano, M.A., **290**, 494
- Jun, Do Youn, **295**, 283
- Jung, Bae Gyo, **296**, 1152
- Jung, Che-Hun, **291**, 550
- Jung, Guhung, **291**, 1031
- Jung, Miyoung, **299**, 102
- Jung, Sung Jun, **295**, 929
- Jung, Sung-Soo, **296**, 1125
- Jung, Yongwon, **290**, 1183; **291**, 431
- Jung, Young D., **298**, 251
- Jung, Yun-jin, **296**, 792
- Junqueira de Azevedo, Inácio de L.M., **298**, 638
- Jurczak, Janusz, **294**, 145
- Juremalm, Mikael, **297**, 480
- Jurutka, Peter W., **299**, 730
- Juvet, Lene K., **299**, 916

- Juzenas, Petras, **297**, 468  
 Juzeniene, Asta, **297**, 468
- Kabashima, Kenji, **290**, 696; **291**, 780  
 Kabelitz, Dieter, **294**, 672  
 Kadel, Stephanie, **291**, 237  
 Kadokura, Michinori, **292**, 642  
 Kadota, Koji, **296**, 497  
 Kadota, Mitsutaka, **299**, 599  
 Kadotani, Yayoi, **297**, 433  
 Kaga, Naoko, **295**, 92  
 Kagami, S., **299**, 555  
 Kagawa, Yasuo, **295**, 207; **297**, 96  
 Kagawa, Yoshiko, **295**, 207  
 Kageyama, Kan, **297**, 353  
 Kahan, Tamar, **294**, 1169  
 Kahan, Thomas, **293**, 13  
 Kahana, Chaim, **293**, 139; **295**, 1142  
 Kahlig, Kris M., **290**, 1545  
 Kahng, Hyung-Yeel, **295**, 903  
 Kai, Yuko, **296**, 395  
 Kaibori, Masaki, **290**, 475  
 Kaibuchi, Kozo, **292**, 697; **297**, 1231  
 Kaidanovich, Oksana, **295**, 102  
 Kaija, Helena, **292**, 128  
 Kainoh, Mie, **290**, 305  
 Kajimoto, Taketoshi, **298**, 738  
 Kajitani, Takashi, **297**, 368  
 Kajiwar, Kagemasa, **293**, 1132  
 Kakehi, Mari, **296**, 644  
 Kakei, Masafumi, **298**, 345  
 Kakinuma, Takumi, **299**, 91  
 Kakizaki, Ikuko, **293**, 220; **297**, 1167  
 Kakizaki, Satoru, **292**, 492  
 Kakudo, Kennichi, **290**, 1483  
 Kakuk, L.E., **293**, 356  
 Kakuma, Tetsuya, **297**, 1259  
 Kakutani, Saki, **290**, 1478  
 Kaleczyc, J., **293**, 1138; **298**, 333  
 Kalef, Edna, **290**, 624  
 Kalina, Uwe, **292**, 937  
 Kalinin, Alexander, **299**, 710  
 Kalluri, Raghu, **295**, 401  
 Kalns, John, **292**, 41; **297**, 506  
 Kalyanaraman, Balaraman, **296**, 1171  
 Kam, Yoonseok, **290**, 375  
 Kamada, Masafumi, **299**, 755  
 Kamada, Masaharu, **290**, 1349  
 Kamada, Nobuo, **298**, 87  
 Kamada, Yasuhiro, **294**, 199  
 Kamakura, Mayuko, **296**, 233  
 Kamataki, Akihisa, **293**, 1007  
 Kamataki, Tetsuya, **293**, 969  
 Kambe, Fukushi, **297**, 288  
 Kameda, Takashi, **293**, 1420  
 Kamei, Reiko, **292**, 642  
 Kamei, Yasuhiro, **294**, 770  
 Kamei, Yasutomi, **296**, 395  
 Kamihira, Shimeru, **296**, 1251  
 Kamijo, Keiju, **291**, 1245  
 Kaminishi, Yoshinori, **296**, 544  
 Kaminski, Wolfgang E., **295**, 408  
 Kamitani, Akihiro, **294**, 261; **290**, 294;  
 Kamitani, Tetsu, **290**, 294; **295**, 774  
 Kamiya, Hiroyuki, **298**, 591  
 Kamiyama, Shin, **291**, 758  
 Kamiyama, Yasuo, **290**, 475  
 Kämpe, Olle, **291**, 951  
 Kanai, Atsushi, **296**, 328  
 Kanai, Mitsuyasu, **292**, 571  
 Kanai, Y., **297**, 722  
 Kanaki, Tatsuro, **294**, 231  
 Kanamori, Heiwa, **297**, 1324  
 Kanamori, Masao, **296**, 214  
 Kanamori, Mutsumi, **290**, 1108  
 Kanaya, Koichi, **290**, 294  
 Kanazawa, Ichiro, **293**, 307; **294**, 268, 429  
 Kanazawa, Takashi, **296**, 20  
 Kanda, Shigeru, **290**, 1354  
 Kanda, Tadahito, **296**, 102  
 Kandimalla, Ekambar R., **297**, 83  
 Kandutsch, Andrew A., **292**, 1227  
 Kane, John P., **292**, 1017  
 Kaneda, Norio, **293**, 1242  
 Kaneider, Nicole C., **297**, 806  
 Kaneko, Shuichi, **292**, 368  
 Kaneko, Shuji, **298**, 398  
 Kaneko, Yoshinari, **294**, 470  
 Kaneko, Yoshinobu, **291**, 707  
 Kaneko-Ishino, Tomoko, **290**, 403  
 Kanesaki, Yu, **290**, 339  
 Kanetake, Hiroshi, **290**, 1354  
 Kaneuchi, Masanori, **296**, 820, 1200; **297**, 558  
 Kang, D.Y., **296**, 293  
 Kang, Heung Sun, **298**, 765  
 Kang, Jae Seung, **298**, 289  
 Kang, Kae-Bok, **297**, 1218  
 Kang, Mi-Kyung, **290**, 1090  
 Kang, Min-Ji, **293**, 617  
 Kang, Sang Sun, **298**, 207  
 Kang, Shin Keon, **294**, 753  
 Kang, Shin-Yong, **296**, 1238  
 Kang, Sung Koo, **293**, 383  
 Kangawa, Kenji, **291**, 884; **295**, 255; **298**, 785  
 Kanki, Hideaki, **298**, 398  
 Kanmatsuse, Katsuo, **297**, 1135  
 Kannan, K.K., **294**, 395  
 Kanno, Takeshi, **294**, 42; **295**, 376  
 Kanno, Yoshihiko, **297**, 255  
 Kano, Hiroki, **291**, 1283  
 Kano, Masanobu, **292**, 318  
 Kano, Tomoko, **294**, 710  
 Kansra, Sanjay, **295**, 1108  
 Kant, Shashi, **299**, 229  
 Kanuka, Hirotaka, **290**, 1275  
 Kanungo, Jyotshnabala, **294**, 667  
 Kanzaki, Toru, **292**, 675  
 Kaplan, Marielle, **290**, 1529  
 Kappas, Attallah, **291**, 68; **296**, 1077  
 Kappler, Joachim, **294**, 742  
 Kapust, Rachel B., **294**, 949  
 Kar, Ari K., **293**, 1077  
 Karabarbounis, Andreas, **298**, 95  
 Karawajczyk, Malgorzata, **291**, 844  
 Karlsson, Roger, **299**, 793  
 Karoulias, N., **297**, 317  
 Karp, Matti, **296**, 1072  
 Karpai, George, **292**, 626  
 Karsani, Saiful Anuar, **295**, 1007  
 Kartarius, Sabine, **296**, 13  
 Kasahara, Daisuke, **298**, 156  
 Kasahara, Tadashi, **293**, 174; **298**, 675  
 Kasai, Hiroki, **298**, 493  
 Kasai, Hiroshi, **295**, 945; **297**, 924  
 Kasai, Noriyuki, **294**, 280  
 Kasai, Shinya, **292**, 94  
 Kasche, Volker, **291**, 146  
 Kashima, Kei, **291**, 48, 855  
 Kashima, Keiichi, **297**, 811  
 Kashiwagi, Keiko, **299**, 252  
 Kashiwagi, Takahito, **290**, 1188; **293**, 698  
 Kashiwayama, Yoshinori, **291**, 1245  
 Kass, David A., **294**, 1030  
 Kasuga, Hisao, **297**, 1332  
 Kasuya, Katsuhisa, **292**, 697  
 Katagiri, Hideki, **299**, 291  
 Katagiri, Makoto, **291**, 296  
 Katakai, Yuko, **292**, 709  
 Kataoka, Hideki, **296**, 214  
 Kataoka, Hiroaki, **290**, 1096  
 Kataoka, Ken, **294**, 843; **298**, 24  
 Kataoka, Takao, **290**, 268  
 Kataoka, Tatsuki R., **290**, 1250; **297**, 111  
 Katayama, Eisaku, **290**, 311; **292**, 268  
 Katayama, Mikio, **291**, 915  
 Katayama, Sigehiro, **290**, 131  
 Katayama, Taiichi, **296**, 313  
 Katayama, Tsutomu, **299**, 42  
 Kato, Hisao, **299**, 847  
 Kato, Kazuyoshi, **290**, 263  
 Kato, Masanori, **292**, 94  
 Kato, Masashi, **292**, 826  
 Kato, Masayoshi, **291**, 41  
 Kato, Masayuki, **297**, 375  
 Kato, Miyuki, **296**, 350  
 Kato, Nobuyuki, **293**, 993  
 Kato, Noriaki, **299**, 183  
 Kato, Shigeaki, **291**, 354; **294**, 779  
 Kato, Shingo, **293**, 61  
 Katoh, Osamu, **292**, 609  
 Katsuda, Koh, **290**, 1101  
 Katsuki, Motoya, **294**, 280  
 Katsuma, Susumu, **296**, 544  
 Katsumata, Yoshinari, **290**, 1048  
 Katsuragi, Takeshi, **293**, 686  
 Katsuya, Yoshio, **297**, 143  
 Katsuzawa, Yukiko, **290**, 1499  
 Kattenfeld, Tanja, **291**, 1180  
 Katti, Seturam B., **295**, 198  
 Kaufmann, Dieter, **294**, 496; **299**, 787  
 Kaufmann, Michel, **291**, 378  
 Kawabata, Ken-ichi, **293**, 727  
 Kawabata, Shigetada, **296**, 1329  
 Kawabe, Takao, **291**, 868  
 Kawabe, Tetsuya, **294**, 359  
 Kawada, Manabu, **298**, 178  
 Kawagoe, Masami, **293**, 1420  
 Kawaguchi, Toshiya, **290**, 475  
 Kawahara, T., **296**, 1322  
 Kawai, Hiroe, **294**, 1101  
 Kawai, Hirokazu, **291**, 210  
 Kawai, Jun, **290**, 1499  
 Kawai, Kumi, **290**, 409  
 Kawai, Nobufumi, **291**, 1265  
 Kawai, Yasuyuki, **297**, 375  
 Kawakami, Atsushi, **296**, 26  
 Kawakami, Shigeru, **294**, 46  
 Kawakami, Yasushi, **297**, 1291  
 Kawamata, Hitoshi, **292**, 957  
 Kawaminami, Mitsumori, **291**, 915  
 Kawamura, Akinori, **291**, 245; **294**, 456  
 Kawamura, Ken-ichi, **290**, 213  
 Kawamura, Kiyoko, **292**, 121; **293**, 1132  
 Kawana, Kei, **296**, 102  
 Kawana, Yukiko, **296**, 102  
 Kawanaka, Kentaro, **296**, 350  
 Kawanami, Hitomi, **295**, 236  
 Kawanami, Rie, **294**, 46  
 Kawanishi, Michiko, **291**, 780; **297**, 682  
 Kawanishi, Shosuke, **290**, 778; **297**, 682  
 Kawano, Hitoshi, **293**, 307  
 Kawano, Keiichi, **294**, 1040  
 Kawano, Mitsuko, **290**, 169  
 Kawano, Nakako, **294**, 553  
 Kawano, Tomonori, **294**, 553  
 Kwarabayashi, Takeshi, **292**, 571  
 Kwarabayashi, Yutaka, **291**, 769  
 Kawasaki, Ichiro, **293**, 698  
 Kawasaki-Koyanagi, Akemi, **296**, 328  
 Kawashima, Rei, **295**, 193  
 Kawata, Hiroko, **297**, 368  
 Kawata, Sumio, **292**, 781; **293**, 150  
 Kawauchi, Junya, **296**, 274; **297**, 1302  
 Kay, Jason G., **291**, 1232  
 Kay, John, **295**, 1020  
 Kayama, Fujio, **291**, 354  
 Kayama, Takamasa, **291**, 1022  
 Kayser, Kevin J., **297**, 242  
 Kazuoka, Takayuki, **298**, 632  
 Kaźmierczak, Katarzyna, **292**, 855  
 Ke, Bin, **296**, 1148  
 Keady, Brian T., **297**, 573  
 Kedci, Noémi, **293**, 777  
 Kees, Salem, **294**, 51  
 Kees, U.R., **294**, 23  
 Keicho, Naoto, **291**, 17  
 Keidar, Shlomo, **290**, 1529  
 Keire, David A., **293**, 1014  
 Keller, Charlotte, **296**, 1264  
 Keller, Kimberly, **296**, 118  
 Keller, Patrick, **293**, 30



- Kellerer, Monika, **290**, 85; **299**, 853
- Kellett, G.L., **296**, 918
- Kelly, Diane E., **299**, 189
- Kelly, Steven L., **299**, 189
- Kellsell, David P., **298**, 651
- Kemp, Bruce E., **293**, 892
- Kemp, E. Helen, **298**, 169
- Kemp, Paul J., **291**, 332
- Kemp, Robert G., **290**, 670
- Kemppainen, Robert J., **296**, 383
- Keniry, Max A., **290**, 1602
- Kenmochi, Naoya, **297**, 1344
- Kennedy, Adam, **291**, 1208
- Kenner, Oliver, **294**, 496; **299**, 787
- Kenney, M. Cristina, **295**, 668
- Keogh, Rosemary J., **290**, 1470; **294**, 1001
- Kepka-Lenhart, Diane, **294**, 749
- Kern, Brigitt, **297**, 641
- Kerokoski, Petri, **298**, 693
- Kerres, K., **296**, 374
- Kézy, Ferenc J., **298**, 755
- Khalkhali-Ellis, Zhila, **295**, 800
- Khan, Akhtar, **291**, 1038
- Khan, Saira, **299**, 438
- Khankin, Eli, **296**, 93
- Khanna, Neeru, **295**, 24
- Khelifa, Riad, **296**, 1118
- Khew-Goodall, Yeessim, **295**, 387
- Khodyreva, Svetlana N., **297**, 714
- al-Khrasani, M., **290**, 153
- Khuder, Sadik A., **293**, 509
- Khurana, Rahul N., **294**, 981
- Kida, Takayuki, **296**, 313
- Kidrič, Marjetka, **297**, 962
- Kiel, Johnathan, **292**, 41; **297**, 506
- Kiemer, Alexandra K., **295**, 1068
- Kieras, Fred J., **293**, 1374
- Kiernan, Urban A., **297**, 401
- Kiess, W., **298**, 798
- Kihara, Shinji, **292**, 781
- Kijima, Toshiro, **296**, 305
- Kikkawa, Fumitaka, **290**, 1048
- Kikkawa, Satomi, **293**, 1364
- Kikkawa, Ushio, **294**, 1109
- Kikkawa, Y., **295**, 255
- Kikuchi, Akihiko, **297**, 749
- Kikuchi, Hisashi, **291**, 769
- Kikuchi, Masatoshi, **299**, 291
- Kikuchi, Seiji, **297**, 419
- Kikuchi, Yasuo, **295**, 657
- Kikuri, Takashi, **298**, 240
- Kikuta, Nana, **294**, 1101
- Kikuta, Tomohiro, **297**, 255
- Kilbane, John J., II, **297**, 242
- Kilker, Ryan P., **296**, 413
- Kim, Arianna L., **298**, 377
- Kim, Chai-Wan, **294**, 818
- Kim, Chang Deok, **290**, 1133
- Kim, Chan Gil, **290**, 35
- Kim, Changmee, **298**, 613
- Kim, Chon Saeng, **290**, 105
- Kim, Chul Geun, **290**, 35
- Kim, Chul Woo, **290**, 325; **298**, 289
- Kim, Dae Kyong, **293**, 383
- Kim, Dae-Joong, **296**, 337
- Kim, D.K., **296**, 293
- Kim, Do Han, **293**, 1295
- Kim, Dong Min, **290**, 585
- Kim, Dong Ok, **298**, 765
- Kim, Dong-Uk, **290**, 613
- Kim, Dong-Wook, **297**, 854
- Kim, Doo-Sik, **293**, 530
- Kim, Eui-Jin, **299**, 621
- Kim, Eun Jeong, **295**, 779
- Kim, Eunhee, **295**, 495
- Kim, Eun Mi, **291**, 1239
- Kim, Hae-Yeong, **295**, 119; **299**, 549
- Kim, Hak-Ryul, **291**, 139
- Kim, Hak Yong, **299**, 352
- Kim, Hee Nam, **291**, 1006
- Kim, Heung-tae, **292**, 1010
- Kim, Hie-Joon, **291**, 1031
- Kim, Hongtae, **296**, 1295
- Kim, Hoon, **291**, 425
- Kim, Ho-Seung, **298**, 216
- Kim, Hwan Gyu, **296**, 401
- Kim, Hyong Bai, **290**, 613
- Kim, Hyun, **298**, 613
- Kim, Hyun A., **295**, 937
- Kim, Hyung Keun, **291**, 1006
- Kim, Hyung-Rho, **290**, 1090
- Kim, Ick Young, **293**, 1248; **294**, 1130
- Kim, In Gyu, **293**, 1453; **294**, 818
- Kim, InHo, **295**, 107
- Kim, In-San, **294**, 940; **297**, 1218
- Kim, In-Sook, **294**, 956
- Kim, Jaebong, **292**, 1081; **298**, 815
- Kim, Jae Bum, **295**, 970
- Kim, Jae-Hong, **293**, 1453; **298**, 392
- Kim, Jae Hyun, **297**, 91
- Kim, Jae Il, **290**, 558; **296**, 1044
- Kim, Jaetaek, **292**, 1010
- Kim, Jae Young, **296**, 1295
- Kim, Jeong Hwan, **291**, 425
- Kim, Jeong-Il, **298**, 457
- Kim, Jin-Hoi, **293**, 862
- Kim, Jinmi, **293**, 733
- Kim, Jin Seuk, **298**, 262
- Kim, Jin Woo, **298**, 178
- Kim, Jiyoung, **294**, 770; **290**, 236
- Kim, Ji Young, **293**, 375
- Kim, Jong-Il, **298**, 815
- Kim, Jong-Suk, **290**, 109
- Kim, Jong Tae, **291**, 1239
- Kim, Jongwan, **295**, 119; **299**, 549
- Kim, Ju, **291**, 139
- Kim, Jun, **295**, 929
- Kim, Jung-Eun, **294**, 940
- Kim, Jung Mogg, **298**, 262
- Kim, Jung-Wan, **295**, 818
- Kim, Jung Woo, **291**, 1239
- Kim, Kee-Hong, **294**, 63
- Kim, Key-Sun, **298**, 392
- Kim, Kil-Hwan, **299**, 498
- Kim, Kilhoun, **296**, 434
- Kim, Kwang-seok, **292**, 1010
- Kim, Kyung Min, **298**, 230
- Kim, Kyungjin, **290**, 1133, 1176
- Kim, Kyu-Won, **290**, 325
- Kim, M.C., **296**, 293
- Kim, Mee Young, **291**, 925; **298**, 687
- Kim, Mi-Hyun, **296**, 1372
- Kim, Mihyung, **296**, 434
- Kim, Min, **296**, 792
- Kim, Min Keun, **291**, 425
- Kim, Minji, **294**, 1151
- Kim, Minkyu, **294**, 1184
- Kim, Myeong Ok, **290**, 457
- Kim, Myung-Sunny, **291**, 663
- Kim, Noe Kyeong, **292**, 383
- Kim, Pyoung Il, **291**, 1006; **295**, 591; **297**, 885; **293**, 231
- Kim, Sam Soo, **298**, 765
- Kim, Se Jin, **291**, 925
- Kim, Seong Hwan, **291**, 62; **296**, 970
- Kim, Seon-Hee, **296**, 221
- Kim, Seung Il, **295**, 903
- Kim, Song-Ja, **296**, 221
- Kim, Soo-Jung, **295**, 903
- Kim, Su Young, **299**, 652
- Kim, Sun-Don, **299**, 102
- Kim, Sunghoon, **291**, 158
- Kim, Sung Soo, **298**, 765
- Kim, Sung Yun, **296**, 419
- Kim, Sung-Woo, **298**, 225
- Kim, Sun-Hoi, **298**, 269
- Kim, Sunoh, **296**, 247
- Kim, Tae You, **292**, 383
- Kim, Tae-Jip, **295**, 818
- Kim, Tae-soo, **294**, 1130
- Kim, Taesung, **298**, 289
- Kim, Taewan, **297**, 1016
- Kim, Tae Yun, **296**, 1238
- Kim, Won, **291**, 1031
- Kim, Wonjae, **298**, 478
- Kim, Woo Ho, **292**, 715
- Kim, Woo Jean, **290**, 325
- Kim, Yang-Hoon, **298**, 225
- Kim, Yangmee, **290**, 204, 558; **296**, 1044
- Kim, Yoan Ki, **297**, 224
- Kim, Yong-Chul, **296**, 1044
- Kim, Yong Ha, **290**, 730
- Kim, Yong-Il, **291**, 1031
- Kim, Yong-Woon, **291**, 722
- Kim, Yoon Ki, **290**, 105
- Kim, Youn-Chul, **295**, 832
- Kim, Young Ho, **295**, 283
- Kim, Young Hoon, **296**, 1295
- Kim, Young-In, **298**, 289
- Kim, Young S., **291**, 466; **294**, 680
- Kim, Young-Wan, **295**, 818
- Kim, Yun-Jeong, **296**, 337
- Kim-Kaneyama, Joo-ri, **299**, 360
- Kim-Shapiro, Daniel B., **292**, 812
- Kimm, Kuchan, **295**, 771
- Kimura, Akinori, **291**, 385
- Kimura, En, **290**, 1042
- Kimura, Hideo, **293**, 1485; **296**, 976
- Kimura, Keizo, **294**, 359; **297**, 672
- Kimura, Makoto, **290**, 421
- Kimura, Masato, **296**, 523
- Kimura, Minoru, **293**, 1132
- Kimura, Mitsuhiro, **290**, 1349
- Kimura, Shoji, **291**, 296
- Kinane, T. Bernard, **297**, 898
- Kindmark, Andreas, **293**, 13
- King, S. Bruce, **292**, 812
- Kingsley, K., **293**, 1000; **294**, 1017
- Kingsley, Philip J., **296**, 612
- Kino, Tomoshige, **298**, 17
- Kino, Yoshihiro, **293**, 1228
- Kinoshita, Eiji, **295**, 452
- Kinoshita, Mako, **293**, 827
- Kinoshita, Naohiko, **293**, 225
- Kintscher, Ulrich, **293**, 1431; **296**, 890; **297**, 794
- Kinuta, Masahiro, **294**, 261
- Kira, Kazunobu, **298**, 779
- Kirchberger, Jürgen, **295**, 992
- Kirchhoff, Sabine, **297**, 459
- Kirima, Kazuyoshi, **293**, 1458
- Kirito, Keita, **291**, 628
- Kirk, Kenneth L., **295**, 107
- Kirsch, Joachim, **294**, 272
- Kirschenbaum, Alexander, **290**, 249
- Kirschner, Marc, **298**, 772
- Kishida, Ken, **292**, 781
- Kishida, Tsunao, **293**, 1530
- Kishimoto, Atsuhiko, **290**, 263
- Kishimoto, Junichi, **290**, 242
- Kishimoto, Michiyuki, **293**, 344
- Kishine, Hiroe, **293**, 993
- Kisker, O., **292**, 886
- Kitabgi, Patrick, **290**, 191, 1161
- Kitagawa, Michinori, **299**, 455
- Kitagawa, Yoshinori, **292**, 642
- Kitajima, Shigetaka, **290**, 213; **296**, 274; **297**, 1302
- Kitami, Yutaka, **290**, 1255
- Kitamoto, Noritoshi, **294**, 280
- Kitamoto, Tetsuyuki, **294**, 280
- Kitamura, A., **299**, 555
- Kitamura, Kazuo, **293**, 741
- Kitamura, Masaru, **291**, 154
- Kitamura, Naomi, **290**, 475, 1096
- Kitamura, Shigeyuki, **293**, 554
- Kitamura, Tsuneo, **291**, 55
- Kitamura, Yukihiko, **290**, 1250; **297**, 111
- Kitamura, Yoshihiro, **290**, 1139
- Kitanaka, Chifumi, **291**, 1022
- Kitani, H., **293**, 167
- Kitaoka, Motomitsu, **296**, 78
- Kitaura, Yasuyuki, **291**, 1166
- Kitayama, Joji, **292**, 347
- Kitazawa, Riko, **290**, 650; **293**, 126
- Kitazawa, Sohei, **290**, 650; **293**, 126
- Kitazono, Masaki, **291**, 806
- Kito, Mariko, **291**, 861; **294**, 363
- Kitson, Richard P., **292**, 184
- Kitzig, Friederike, **296**, 355
- Kiyono, Hiroshi, **297**, 329
- Kiyono, Tohru, **295**, 354
- Kiyosawa, Hidenori, **290**, 1499
- Kizaki, Takako, **295**, 236; **296**, 54



- Kizawa, Kenji, **299**, 857  
 Klarlund Pedersen, Bente, **296**, 1264  
 Klausmeyer, Paul, **296**, 1228  
 Klausner, Adam, **290**, 249  
 Klein, Franziska, **299**, 780  
 Klein, Jochen, **297**, 545  
 Klein, Johannes, **290**, 1084  
 Klein, John R., **294**, 626  
 Kleiner, Peter, **292**, 1044; **299**, 857  
 Klement, Éva, **292**, 931  
 Klingler, Jürgen, **299**, 787  
 Klocke, Rainer, **294**, 864  
 Kloetzel, Peter-Michael, **291**, 542  
 Klomsiri, Chananat, **299**, 177  
 Kluxen, Franz-Werner, **293**, 1377  
 Knauper, Vera, **293**, 501  
 Kneisel, Andrea, **299**, 787  
 Knibiehler, Bernard, **290**, 539  
 Knierman, Michael D., **293**, 207  
 Kniesch, Silke, **298**, 163  
 Knight, Richard A., **291**, 1123  
 Knolle, Anja, **297**, 78  
 Knopf, Carlos, **290**, 1529  
 Knöpfel, Martin, **291**, 220  
 Kneuppel, Tanja, **298**, 116  
 Ko, Lung-Sang, **297**, 267  
 Ko, Young Jin, **296**, 1295  
 Koba, Masahiro, **296**, 544  
 Kobatake, Eiry, **291**, 361  
 Kobayashi, Hirofumi, **291**, 567  
 Kobayashi, Hiroya, **291**, 296  
 Kobayashi, Hiroyuki, **293**, 691  
 Kobayashi, Kana, **290**, 948  
 Kobayashi, Kazuhiro, **291**, 1283  
 Kobayashi, Ken-ichi, **292**, 368  
 Kobayashi, Masaaki, **294**, 1121  
 Kobayashi, Masumi, **298**, 793  
 Kobayashi, Nobuyuki, **294**, 714  
 Kobayashi, Ryoji, **292**, 1023  
 Kobayashi, Shin, **290**, 403  
 Kobayashi, Shin-ichi, **291**, 628  
 Kobayashi, Takeshi, **294**, 199  
 Kobayashi, Tatsuya, **297**, 255  
 Kobayashi, Tohru, **297**, 632  
 Kobayashi, Toshihiro, **296**, 145  
 Kobayashi, Tsuyoshi, **293**, 945  
 Kobayashi, Yasuna, **290**, 482  
 Kobayashi, Yoko, **293**, 1348  
 Kobayashi, Yoshiro, **298**, 675  
 Kobayashi, Yuji, **291**, 1297  
 Kobayashi, Yuki, **299**, 57  
 Kobilka, Brian K., **298**, 824  
 Koch, Sheryl E., **293**, 1405  
 Kochel, Izabela, **294**, 1036  
 Köcher, Thomas, **293**, 747  
 Kochetov, German A., **294**, 155  
 Kochi, Hideo, **296**, 530  
 Kochlatyi, Sergei, **292**, 652  
 Kocsis, L., **290**, 153  
 Kodadek, Thomas, **296**, 991  
 Kodaka, Masato, **290**, 121  
 Kodama, Takao, **293**, 969  
 Kodama, Tatsuhiko, **290**, 858; **294**, 528  
 Koenig, Ulrich, **293**, 722  
 Kofroňová, Olga, **299**, 335  
 Koga, Kaori, **292**, 456  
 Koga, Kohachiro, **290**, 973  
 Koga, Toshihiko, **292**, 964  
 Koga, Yasuhiko, **297**, 773  
 Koga, Yoshinori, **291**, 385  
 Koglin, Markus, **292**, 1057  
 Kogo, Mikihiro, **297**, 32  
 Koguchi, Emiko, **293**, 174  
 Koh, Duk-Su, **290**, 1176  
 Koh, Ho-Jin, **292**, 542  
 Kohara, Kyoko, **290**, 1188  
 Kohara, Michinori, **290**, 1188  
 Kohara, Yuji, **293**, 698  
 Kohase, Masayoshi, **293**, 1364  
 Kohashi, Ryuichiro, **292**, 133  
 Kohda, Takashi, **290**, 403  
 Kohgo, Yutaka, **296**, 1286  
 Kohiyama, Masamichi, **296**, 749  
 Kohjima, Motoyuki, **299**, 641  
 Kohlase, Jürgen, **296**, 870  
 Kohmura, Eiji, **295**, 376  
 Kohn, E.C., **293**, 1099  
 Kohno, Kenji, **296**, 568  
 Kohno, Kimitoshi, **295**, 945  
 Kohno, Shigeru, **296**, 32  
 Kohri, Kenjiro, **293**, 753  
 Kohu, Kazuyoshi, **294**, 1151  
 Koibuchi, Noriyuki, **299**, 384  
 Koide, Hiroko, **297**, 329  
 Koike, Hisashi, **293**, 800  
 Koike, Katsuro, **297**, 17  
 Koike, Kenichi, **293**, 1314  
 Koike, Michiya, **298**, 46  
 Koike, Norimasa, **294**, 906  
 Koizuka, Izumi, **295**, 370  
 Koizumi, Ken-ichi, **295**, 869  
 Koizumi, Schuichi, **291**, 124; **294**, 1087  
 Koizumi, Tomohide, **295**, 917  
 Kojima, Hisako, **295**, 193  
 Kojima, Kouji, **297**, 616  
 Kojima, Masami, **291**, 884; **295**, 255; **294**, 1087  
 Kojima, Masayasu, **298**, 785  
 Kojima, Takeshi, **298**, 450  
 Kojima, Yuko, **296**, 328  
 Kok, Yee-Jiun, **294**, 934  
 Kokame, Koichi, **299**, 847  
 Kokubu, Akiko, **291**, 1022  
 Kokubu, Hiroshi, **296**, 85  
 Kokubun, Shinichiro, **297**, 1135  
 Kola, I., **291**, 191  
 Koland, John G., **295**, 800  
 Kolb, Annie, **292**, 922  
 Kolb, Hubert, **294**, 592  
 Kolkhof, Peter, **296**, 343  
 Kolkowski, Edgardo C., **293**, 1066  
 Komai, Koichiro, **299**, 455  
 Komai, Michio, **291**, 758  
 Komatani, Hideya, **299**, 669  
 Komatsu, Kenshi, **296**, 62  
 Komatsu, Masaaki, **292**, 256  
 Komatsu, Masaharu, **291**, 806  
 Komatsu, Norio, **291**, 628; **292**, 609  
 Komatsu, Setsuko, **290**, 690  
 Komatsu, Yasato, **291**, 987  
 Komatsuzaki, Katsumi, **297**, 898  
 Komazaki, Shinji, **292**, 318  
 Kominami, Eiki, **292**, 256; **296**, 1164  
 Kominami, Kin-ichiro, **290**, 1399  
 Kominami, Ryo, **290**, 16  
 Komiya, Ichiro, **291**, 675  
 Komiya, Atsushi, **293**, 1314  
 Komiya, Kanki, **291**, 1065  
 Komoda, Tugikazu, **290**, 131  
 Komori, Yasunori, **290**, 311  
 Komura, Eri, **297**, 138  
 Komuro, Issei, **298**, 493  
 Kon, Kazuyoshi, **291**, 55  
 Konakahara, Takeo, **290**, 121  
 Kondo, Hisatake, **298**, 793  
 Kondo, Mariko, **293**, 327  
 Kondo, Naomi, **292**, 109  
 Kondo, S., **299**, 555  
 Kondo, Seiji, **295**, 445  
 Kondo, Takahito, **296**, 32; **297**, 353  
 Kondo, Takashi, **290**, 498; **293**, 1287  
 Kondo, Yukihiro, **294**, 770  
 Kondo, Yumi, **296**, 553  
 Kondoh, Junpei, **294**, 770  
 Kondoh, Takeshi, **291**, 669; **295**, 376  
 Koner, Bidhan Chandra, **297**, 502  
 Kong, In-Soo, **298**, 269  
 Kong, Xiang-duo, **292**, 1111  
 Kongphanich, Aulus, **294**, 714  
 Konieczny, Stephen F., **295**, 910; **299**, 7  
 Konishi, Atsushi, **293**, 945  
 Kono, Takuo, **296**, 20  
 Kono, Tomohiro, **290**, 1499  
 Kono, Yoshiki, **291**, 494  
 Konopka, Monika A., **290**, 806  
 Konrad, Robert J., **293**, 207  
 Koo, Bon-Sun, **290**, 1090  
 Kopecký, Vladimír, Jr., **297**, 154  
 Kopperschlager, Gerhard, **295**, 992  
 Korenberg, Julie R., **293**, 881; **299**, 1  
 Kornbliht, Alberto R., **295**, 1077  
 Korneluk, Robert G., **295**, 289  
 Körtvélyesi, Tamás, **292**, 931  
 Kosar, Andrew D., **294**, 132  
 Koschmieder, Steffen, **292**, 937  
 Koseki, Akihiko, **293**, 1132  
 Koseki, Haruhiko, **295**, 869; **296**, 729  
 Koshikawa, Nobuko, **297**, 346  
 Koshimura, Jun, **298**, 345  
 Koshizuka, Tetsuo, **298**, 357  
 Kostyuk, P.G., **293**, 132  
 Kosuge, Kotoko, **297**, 1135  
 Kotamraju, Srigiridhar, **296**, 1171  
 Kotlarz, Grazyna, **295**, 737  
 Kotler, Moshe, **292**, 832  
 Kotormán, M., **293**, 416  
 Kouguchi, Hirokazu, **292**, 434  
 Koul, Dimpy, **292**, 422  
 Koutoku, Hiroshi, **294**, 779  
 Kouyama, Keisuke, **295**, 621  
 Kovalenko, Sergei P., **298**, 37  
 Kovina, Marina V., **294**, 155  
 Kowal, Dianne, **294**, 655  
 Kowal, Przemyslaw, **295**, 1  
 Koyabu, Noriko, **296**, 644  
 Koyama, Kotaro, **296**, 20  
 Koyama, Minami, **294**, 429  
 Koyama, Noriko, **292**, 937  
 Koyanagi, Takeshi, **291**, 385  
 Kozak, Kevin R., **296**, 612  
 Kozakai, Takaharu, **297**, 1339  
 Kozhukh, Gennady V., **298**, 457  
 Kozik, Andrzej, **294**, 423  
 Kozlowski, Roland Z., **292**, 208; **296**, 857  
 Kraeling, R.R., **293**, 1138; **298**, 333  
 Krambovitis, Elias, **298**, 574  
 Kramer, David M., **294**, 76  
 Kramer, Deborah, **296**, 1257  
 Krammer, Peter H., **297**, 459  
 Kra-Oz, Zipora, **296**, 93  
 Krasinski, Stephen D., **299**, 587  
 Krasnova, S.B., **292**, 799  
 Kratzsch, J., **298**, 798  
 Krauskopf, Manuel, **295**, 582  
 Kreizman, Tamar, **290**, 682  
 Kremer, Richard, **299**, 446  
 Kremerskothen, Joachim, **295**, 678  
 Kretzler, Matthias, **297**, 880  
 Krieger, John N., **298**, 581  
 Krieser, Ronald J., **292**, 415  
 Kristensen, Peter, **298**, 566  
 Kristjansson, Gunnar Ingi, **293**, 1438  
 Kronenberg, Mark S., **290**, 955  
 Krucher, Nancy A., **297**, 463  
 Krueger, Andreas, **297**, 459  
 Krueger, Sharon K., **292**, 558  
 Krumscheid, Rita, **297**, 154  
 Kruse, Marie-Luise, **294**, 672  
 Kubala, Martin, **297**, 154  
 Kubernath, R., **290**, 443  
 Kubiński, Konrad, **296**, 1310  
 Kubiak, Teresa M., **291**, 313  
 Kubo, Takeo, **291**, 23  
 Kubo, Toshikazu, **293**, 1530  
 Kuboki, Takuo, **295**, 445  
 Kubota, Atsuko, **297**, 811  
 Kubota, Hiroshi, **290**, 909  
 Kubota, Satoshi, **295**, 445; **299**, 755  
 Kubota, Yasuo, **292**, 1023  
 Kuchino, Yoshiyuki, **291**, 1022  
 Kudlow, Jeffrey E., **293**, 207  
 Kudo, Daisuke, **297**, 1167  
 Kudo, Hideki, **295**, 207  
 Kudo, Ichiro, **292**, 689  
 Kudo, Takashi, **296**, 313  
 Kudoh, Masafumi, **294**, 779  
 Kuehle, Melanie K., **296**, 911  
 Kühn, Hartmut, **290**, 988  
 Kühn-Wache, Kerstin, **291**, 1302

- Kuga, Shigenori, **295**, 458  
 Kuiper, Johan, **293**, 1279  
 Kukolj, George, **295**, 682  
 Kuksis, Arnis, **290**, 391  
 Küllmer, Sina, **298**, 163  
 Kulomaa, Markku S., **299**, 703  
 Kumagai, Hiromichi, **291**, 623  
 Kumagai, Izumi, **295**, 31  
 Kumakura, Shin-ichi, **297**, 1297  
 Kumano, Keiki, **291**, 775  
 Kumano, Satoshi, **293**, 396  
 Kumar, Mukesh, **294**, 395  
 Kumar, P. Anand, **299**, 345  
 Kumar, Rajiv, **290**, 1558; **297**, 645  
 Kumar, Santosh, **294**, 806  
 Kumasaka, Takashi, **290**, 421  
 Kumazawa, Yoshinori, **299**, 57  
 Kumon, Hiromi, **294**, 261  
 Kundu, Bishwajit, **291**, 903; **293**, 572  
 Kundu, Siddhartha, **295**, 24  
 Kunert-Radek, Jolanta, **297**, 931  
 Kung, Hsiang-fu, **290**, 737; **292**, 1081; **295**, 1102; **297**, 185; **298**, 121, 815  
 Kung, Wen-Mei, **296**, 949  
 Kunicki, Jan, **297**, 1311  
 Kunieda, Takekazu, **291**, 23  
 Kunihiro, Ikuko, **290**, 909  
 Kuniyasu, Akihiko, **295**, 319  
 Kunugita, Naoki, **297**, 924  
 Kuo, M. Tien, **290**, 1427  
 Kuo, Hann-chorng, **291**, 1293  
 Kuppusamy, Periannan, **294**, 1030  
 Kupryszewski, Gotfryd, **292**, 855  
 Kurabayashi, Masahiko, **293**, 332  
 Kurachi, Makoto, **292**, 368; **298**, 675  
 Kurachi, Yoshihisa, **296**, 523  
 Kuramochi, D., **295**, 630  
 Kuramochi, Yu, **299**, 49  
 Kurasaki, Masaaki, **297**, 517  
 Kurashima, Yukiko, **296**, 976  
 Kurata, Miyuki, **290**, 1199  
 Kurata, Takeshi, **293**, 1084; **294**, 509; **297**, 593  
 Kurimasa, Akihiro, **295**, 112  
 Kurita, Souichi, **291**, 41  
 Kuriyama, Kohji, **299**, 903  
 Kuriyama, Koji, **292**, 318  
 Kuriyama, Takayuki, **295**, 869  
 Kurlandzka, Anna, **294**, 1144  
 Kuroda, Masahiko, **290**, 984  
 Kuroda, Rieko, **290**, 878  
 Kuroda, Taruho S., **293**, 899  
 Kuroda, Y., **299**, 555  
 Kuroda, Yoichiro, **299**, 384  
 Kuroda, Yukiko, **299**, 328  
 Kuroiwa, Mie, **294**, 1101  
 Kuroiwa, Takashi, **291**, 210  
 Kurokawa, Mineo, **299**, 116  
 Kurokawa, Tadahide, **294**, 912  
 Kurokawa, Kenji, **294**, 714  
 Kurokawa-Seo, Misuzu, **290**, 113  
 Kuroki, Hiroaki, **293**, 554  
 Kuroki, Masahide, **290**, 1551  
 Kuroki, Motomu, **290**, 1551  
 Kuroki, Toshio, **294**, 1109  
 Kuromitsu, Junro, **290**, 177, 1114  
 Kurosaka, Akira, **298**, 755  
 Kurosawa, Hisashi, **292**, 999  
 Kurose, Hitoshi, **291**, 995  
 Kurose, Youhei, **295**, 255; **298**, 785  
 Kurusu, Shiro, **291**, 915  
 Kusakabe, Moriaki, **290**, 1220  
 Kusakabe, Suzuno, **294**, 363  
 Kusama, Hiroshi, **290**, 131  
 Kusayanagi, Satoshi, **290**, 1289  
 Kusba, Jozef, **294**, 886  
 Kuse, Masaki, **293**, 874  
 Kushida, Taketoshi, **291**, 68  
 Kuster, Thomas, **292**, 1044  
 Kuthan, Martin, **294**, 962  
 Kutuzov, Mikhail A., **293**, 1047  
 Kuwabara, Mikinori, **293**, 1571  
 Kuwada, Masahiro, **295**, 193  
 Kuwagaki, Misato, **299**, 247  
 Kuwahara, Masaaki, **297**, 918  
 Kuwahara, Tomomi, **295**, 917  
 Kuwano, Michihiko, **296**, 644  
 Kuwayama, Shigeki, **294**, 205  
 Kuzuhara, Yoko, **290**, 1195  
 Kveine, Marit, **297**, 912  
 Kwak, Jiyeon, **295**, 929  
 Kwan, Edwin, **292**, 980  
 Kweon, Joon-Chul, **294**, 818  
 Kwok, Ka-Leung, **292**, 564  
 Kwon, A-Hon, **290**, 475  
 Kwon, Deug-Nam, **293**, 862  
 Kwon, Eun-Soo, **297**, 854  
 Kwon, H. Moo, **294**, 968  
 Kwon, Oh-Seok, **293**, 1453  
 Kwon, Ohsuk, **290**, 824  
 Kwon, Ryuk-Jun, **298**, 478  
 Kwon, Sijoong, **298**, 765  
 Kwon, Taeg Kyu, **290**, 1506; **298**, 230  
 Kwon, Taegun, **298**, 207  
 Kyaw, Moe, **293**, 1458  
 Kyd, Jennelle, **299**, 377  
 Kyono, Kiyoshi, **292**, 659  
 Labarrere, Carlos, **298**, 603  
 Labesse, Gilles, **294**, 173  
 Laborda, Jorge, **291**, 193  
 Lacal, Juan Carlos, **296**, 580  
 Lacarelle, Bruno, **297**, 249  
 Lacasa, Danièle, **291**, 394  
 Lachowicz Ochędalska, Agnieszka, **294**, 95; **297**, 931  
 Lacour, Stephan, **292**, 922  
 Laczko, I., **293**, 18, 416  
 La Du, Bert N., **290**, 391  
 Laezza, Chiara, **295**, 603  
 Laffont, Isabelle, **292**, 83  
 Lafont, Huguette, **292**, 390  
 Lagali, P.S., **293**, 356  
 Lahaye, Chantal, **295**, 841  
 Lahlou, Hicham, **290**, 539  
 Lai, Luhua, **291**, 795; **297**, 446  
 Lai, Ren, **295**, 796  
 Lai, Zhi-Wei, **291**, 1194  
 Laing, Nigel, **296**, 300  
 Lairon, Denis, **292**, 390  
 Lakomy, M., **293**, 1138  
 Łakomy, M., **298**, 333  
 Lakowicz, Joseph R., **294**, 886  
 Lala, Peeyush K., **294**, 1079  
 Lalani, El-Nasir, **292**, 102  
 Lalu, Manoj M., **296**, 937  
 Lalwani, Anil K., **297**, 987  
 La Mantia, Girolama, **291**, 1138  
 Lam, Philip Yeung, **294**, 726  
 Lam, Y.W., **290**, 563  
 Lamas, Daniel, **295**, 682  
 Lamas, Oscar, **291**, 1201  
 Lamb, David C., **299**, 189  
 Lambeau, Gerard, **292**, 689  
 Lambert, Glenna W., **291**, 1052  
 Lambertini, Elisabetta, **292**, 761  
 Lammert, A., **298**, 798  
 Landais, Stéphanie, **294**, 173  
 Landgren, Eva, **291**, 951  
 Landini, Paolo, **292**, 922  
 Lane, E. Birgitte, **297**, 818  
 Lane, Timothy F., **290**, 602  
 Lange, Reinhard, **293**, 593  
 Lange, Yvonne, **290**, 488  
 Langel, Ülo, **291**, 945; **299**, 85  
 Langer, Claus, **296**, 1051  
 Langin, Dominique, **291**, 286  
 Langin, T., **297**, 1197  
 Langmann, Thomas, **295**, 408  
 Langner, Jürgen, **295**, 423  
 Lanier, Lewis L., **290**, 140  
 Lanzalunga, Osvaldo, **293**, 832  
 Lapeyrie, Frédéric, **294**, 553  
 La Porta, Caterina A.M., **294**, 127; **294**, 127  
 Laporte, Jocelyn, **291**, 305  
 Lapteva, Natalia, **296**, 194  
 Larcher, Jean-Christophe, **297**, 787  
 Larisch, Sarit, **296**, 93  
 Lerner, Joseph, **293**, 1092; **295**, 561  
 Laroche, Nancy, **292**, 626  
 Larroque, Christian, **294**, 116  
 Larsen, Jakob E., **299**, 35  
 Larsen, Martha J., **291**, 313  
 Larsen, Martin, **298**, 566  
 Larsson, Erik, **297**, 335  
 Lasmoles, Françoise, **297**, 641  
 Latasa, Maria-Jesus, **293**, 793  
 Latchman, David S., **294**, 487  
 Lattard, Virginie, **292**, 558  
 Lau, Anthony G., **297**, 565  
 Lau, George K.K., **295**, 1102  
 Lau, Lok-Ting, **297**, 267  
 Lauck, Vanessa, **291**, 680  
 Laurell, Henrik, **291**, 286  
 Laurora, Stefano, **295**, 267  
 Lavan, Brian E., **293**, 1021  
 Lavelle, Donald, **297**, 760  
 Lavrik, Olga I., **297**, 714  
 Law, John H., **292**, 1191  
 Law, Ronald E., **293**, 1431; **297**, 794  
 Lawler, John M., **290**, 47; **294**, 1093  
 Lay, Luigi, **292**, 222  
 Lazar, Catalin, **296**, 470  
 Lazdunski, Michel, **292**, 339  
 Lazereg, Sylvie, **297**, 787  
 Lazyrev, V.N., **293**, 155  
 Lazzari, M.A., **299**, 343  
 Lebedeva, Natalia A., **297**, 714  
 LeBel, Denis, **296**, 618  
 Lebrun, M., **297**, 1197  
 Lechner, Andreas, **293**, 670  
 Ledent, Catherine, **292**, 231  
 Ledoux, Dominique, **293**, 1174  
 Lee, Alex Q., **290**, 1513  
 Lee, Boyoung, **290**, 457  
 Lee, Byung-Heon, **297**, 1218  
 Lee, Chang-Soo, **291**, 663  
 Lee, Chun-Chung, **291**, 185; **296**, 710  
 Lee, Dae-Yeol, **294**, 480  
 Lee, Dae-Yeon, **292**, 715; **295**, 119; **299**, 549  
 Lee, Dong Gun, **291**, 1006; **293**, 231; **295**, 591; **297**, 885  
 Lee, Dong Kun, **294**, 408  
 Lee, Dong-Sin, **294**, 940  
 Lee, Doyun, **290**, 1176  
 Lee, Eunbong, **295**, 119  
 Lee, Eun Bong, **299**, 549  
 Lee, Eunhee Bae, **294**, 940  
 Lee, Eun Jig, **295**, 261  
 Lee, Eunjung, **298**, 207  
 Lee, Eva Y.-H.P., **296**, 1019  
 Lee, H., **299**, 634  
 Lee, H.J., **296**, 293  
 Lee, Ho-Ki, **291**, 85  
 Lee, Hosoon, **292**, 715; **295**, 119  
 Lee, Ho Soon, **292**, 383  
 Lee, Hwei-Jen, **292**, 66  
 Lee, Hye J., **292**, 632  
 Lee, Hyosang, **298**, 815  
 Lee, Hyun-Shik, **292**, 1081; **298**, 815  
 Lee, Il-Ha, **294**, 956  
 Lee, Il-Han, **299**, 621  
 Lee, In-Hwa, **295**, 832  
 Lee, In-Seon, **292**, 94  
 Lee, Jae Ho, **291**, 925  
 Lee, Jae-Ho, **296**, 1157  
 Lee, Jae-Yong, **298**, 815  
 Lee, J.E., **299**, 806  
 Lee, Je Ho, **296**, 1005  
 Lee, Jeewon, **298**, 225  
 Lee, Jeong Eun, **298**, 230  
 Lee, Jeong K., **299**, 621  
 Lee, Jeong-Chae, **291**, 139  
 Lee, Jeong-Hwa, **294**, 956  
 Lee, Jiahn-Shing, **295**, 854; **297**, 309  
 Lee, Jinhwa, **298**, 765  
 Lee, Ji-Young, **293**, 617  
 Lee, Ji-Yun, **296**, 1238  
 Lee, Jong-Hee, **298**, 269  
 Lee, Jong-Keuk, **295**, 771



- Lee, Jong Sang, **291**, 158  
 Lee, Joo Y., **298**, 667  
 Lee, Joon, **297**, 854  
 Lee, Junechul, **298**, 289  
 Lee, Jung Hyun, **290**, 35  
 Lee, Jung Ro, **296**, 1152  
 Lee, Jung Young, **299**, 652  
 Lee, Kai-Fai, **292**, 564  
 Lee, Kang-Min, **291**, 663  
 Lee, Kee H., **298**, 251  
 Lee, Keesook, **296**, 337  
 Lee, Ki-Hwan, **298**, 216  
 Lee, Ki-Young, **292**, 682; **296**, 434  
 Lee, Kweon-Haeng, **296**, 1295  
 Lee, Kyoung Hoa, **291**, 1239  
 Lee, Kyun Oh, **296**, 1152  
 Lee, Kyung-Kwang, **290**, 236  
 Lee, Myoung-Hee, **295**, 818  
 Lee, Myung Ae, **295**, 970  
 Lee, Myung-Jae, **294**, 956  
 Lee, Sae-Won, **290**, 325  
 Lee, Sang Do, **294**, 968  
 Lee, Sang Jo, **290**, 1183  
 Lee, Sang Joon, **291**, 431  
 Lee, Sang Jun, **290**, 585 **296**, 1152  
 Lee, Sang-Hee, **290**, 613  
 Lee, Sang-Hun, **298**, 262  
 Lee, Sang-Sook, **293**, 375  
 Lee, Sangwon, **291**, 158  
 Lee, Sang Yeol, **290**, 457;  
 Lee, Seongeun, **295**, 119; **299**, 549  
 Lee, Seong-Wook, **290**, 656; **298**, 486  
 Lee, Seung-Ryong, **290**, 1506  
 Lee, Seung Sik, **296**, 1152  
 Lee, So-Hyun, **292**, 542  
 Lee, Song Hee, **290**, 105  
 Lee, Soo-Young, **294**, 956  
 Lee, Su Jae, **298**, 765  
 Lee, Su Min, **292**, 542  
 Lee, Sug Hyung, **299**, 652  
 Lee, Suk-Hee, **294**, 940  
 Lee, Sun Mi, **295**, 616  
 Lee, Sung-Eun, **292**, 542  
 Lee, Sunghae, **298**, 687  
 Lee, Sung-Hee, **299**, 352  
 Lee, Sung-Young, **292**, 1081; **298**, 815  
 Lee, Wang Jae, **298**, 289  
 Lee, Wen Hui, **295**, 796  
 Lee, Y.E., **299**, 806  
 Lee, Yeon-Sook, **296**, 434  
 Lee, Yong Soo, **296**, 337  
 Lee, Yong-Sung, **296**, 1125; **298**, 216, 262  
 Lee, You Mie, **290**, 325  
 Lee, Young, **297**, 1259  
 Lee, Younghoon, **290**, 1183; **291**, 431  
 Lee, Young Ik, **296**, 1005  
 Lee, Yu-Po, **297**, 523  
 Lee-Huang, Sylvia, **292**, 441  
 Leech, Colin A., **293**, 670  
 Leem, Sun-Hee, **295**, 903  
 Lees, Peter S.J., **295**, 978  
 Lees, Wendy E., **295**, 1020  
 Lefebvre, Sylvain, **295**, 682  
 Lefkowitz, Lee J., **295**, 1062  
 Le Gall, Jean, **294**, 60; **299**, 173  
 Legendre, Christiane, **295**, 1052  
 Lehman, Jason A., **293**, 463  
 Lehner, Andreas F., **290**, 275  
 Lei, Xin Gen, **297**, 1016  
 Leigh, Irene M., **298**, 651  
 Leirdal, Marianne, **295**, 744  
 Leistner, Werner, **294**, 496  
 Lekmine, Fatima, **291**, 744  
 Lemaigre, Frédéric P., **292**, 848  
 Lemaire, Christophe, **298**, 282  
 Lemdani, Mohamed, **293**, 1114  
 Lemeshko, Victor V., **291**, 170  
 Lemire, Bernard D., **291**, 8  
 Lenaz, Giorgio, **290**, 1589  
 Leneveu, Marie-Christine, **293**, 622  
 Leng, Qibin, **298**, 464  
 Lengyel, György, **291**, 29  
 Lengyel, I., **290**, 153  
 Lennarz, William J., **292**, 1209  
 Lenox, Robert H., **292**, 969  
 Lentze, M. J., **290**, 1308  
 Leo, Monica, **299**, 418  
 Leo-Kottler, Beate, **295**, 342  
 Leong, John C.Y., **298**, 121  
 Leoni, Chiara, **291**, 972  
 Léopold, Pierre, 288  
 Leroux-Roels, Geert, **297**, 486  
 Lesieur, Daniel, **293**, 1114  
 Lestavel, Sophie, **293**, 1114  
 Lesueur, F., **294**, 108  
 Lesuisse, Dominique, **298**, 185  
 Leta, Aida, **291**, 255  
 Leu, Steve, **294**, 448  
 Leung, K.T., **299**, 634  
 Leung, Yuk Man, **292**, 980  
 Levels, Johannes H.M., **295**, 1156  
 Lervet, Keith L., **291**, 1213  
 Levi, A.J., **297**, 302  
 Levi, Tatjana, **294**, 1169  
 Levine, Alan D., **296**, 637  
 Levine, Alice C., **290**, 249  
 Levine, Michael A., **296**, 67  
 Levis, C., **297**, 1197  
 Lexime, Jinette, **292**, 231  
 Li, Changlin, **296**, 742  
 Li, Dali, **299**, 542  
 Li, Dapei, **292**, 287  
 Li, Dayuan, **291**, 349  
 Li, Fang, **293**, 939  
 Li, Guofu, **290**, 1128  
 Li, Guoping, **299**, 886  
 Li, Hai-Tao, **299**, 173  
 Li, Jiang, **297**, 987  
 Li, Jianmin, **291**, 101  
 Li, Jianwei J., **292**, 31  
 Li, Jianyong, **290**, 287  
 Li, Jinjun, **297**, 528  
 Li, Jiong, **293**, 593  
 Li, Jun, **296**, 1245  
 Li, Lin, **290**, 1411  
 Li, Long-Cheng, **294**, 464  
 Li, Mei, **294**, 60  
 Li, Mi, **295**, 1020  
 Li, Shu-Ben, **295**, 182  
 Li, Shun-Ai, **294**, 261  
 Li, Wei-Jiang, **299**, 647  
 Li, Xiangrong, **294**, 384  
 Li, Xiaoxia, **296**, 406  
 Li, Xin, **297**, 148  
 Li, Xing-Guo, **290**, 1079  
 Li, Yen-Yao, **297**, 116  
 Li, Yi, **295**, 129, 136; **296**, 281  
 Li, Yi-Dan, **296**, 406  
 Li, Yikun, **295**, 884  
 Li, Yin, **298**, 439  
 Li, Yingzhu, **299**, 697  
 Li, Yongqing, **295**, 862; **296**, 206; **299**, 542, 606  
 Li, Yuan Yuan, **296**, 530  
 Li, Yunbo, **292**, 50; **293**, 705  
 Li, Yuyang, **297**, 528  
 Li, Zaibo, **294**, 700  
 Li, Zai-Ping, **299**, 723  
 Li, Zhixing, **293**, 691  
 Li, Zhong-you, **296**, 214  
 Li, Zhuang, **299**, 910  
 Liang, Binhua, **295**, 702, 713  
 Liang, Chih-Chuan, **290**, 1079  
 Liang, Dong-Cai, **294**, 60; **299**, 173  
 Liang, Jack, J.-N., **293**, 7  
 Liang, Ruqiang, **293**, 593  
 Liang, Shizhong, **291**, 605  
 Liang, Yu-Chih, **294**, 167  
 Liang, Yun-Fei, **296**, 1148  
 Liao, Ching-Fong, **294**, 900  
 Liao, Ching-Len, **298**, 805  
 Liao, Jiahn-Haur, **295**, 854; **297**, 309  
 Liao, Jun, **294**, 60  
 Liao, Wen-Tao, **293**, 675  
 Liaubet, Laurence, **291**, 305  
 Liaw, Shwu-Huey, **291**, 165  
 Libermann, T.A., **296**, 897  
 Lichtler, Alexander C., **290**, 955  
 Lidstrom, Mary E., **299**, 268  
 Lieber, Charles S., **291**, 1109; **294**, 849; **299**, 459  
 Lieberman, Jay R., **297**, 523  
 Liedtke, Thomas, **295**, 678  
 Lieu, Ann-Shung, **299**, 196  
 Liew, Choong-Chin, **296**, 1134  
 Light, Robley J., **292**, 1213  
 Lightner, David A., **293**, 1077  
 Lillehoj, Hyun Soon, **299**, 321  
 Lim, Chae Oh, **290**, 457; **296**, 1152  
 Lim, Dmitri, **290**, 1015; **296**, 484  
 Lim, H.W., **299**, 806  
 Lim, Mei Ann, **294**, 136  
 Lim, Ramon, **294**, 238  
 Lim, Seung Oe, **291**, 1031  
 Lim, Woo Jin, **291**, 425  
 Lim, Yoon, **292**, 715; **295**, 119; **299**, 549  
 Lima, Carla S., **296**, 1334  
 Lima, Maria F., **290**, 29  
 Lin, Chen-Hui, **291**, 798  
 Lin, Chia-Yu, **296**, 383  
 Lin, Chi-Hung, **294**, 535  
 Lin, Ching-Shwun, **292**, 79; **295**, 1014  
 Lin, Chun-Hung, **295**, 167  
 Lin, Chun-Mao, **294**, 167  
 Lin, Edmund C.C., **290**, 824  
 Lin, Guang-Huey, **292**, 789  
 Lin, Guiting, **292**, 79; **295**, 1014  
 Lin, Guorong, **290**, 663; **291**, 727  
 Lin, Jen-Kun, **294**, 167  
 Lin, Ji, **291**, 701  
 Lin, Jiang-hai, **299**, 74  
 Lin, Jing-Jer, **291**, 714  
 Lin, Lin, **296**, 827  
 Lin, Marie C., **295**, 1102; **297**, 185  
 Lin, Michael T., **290**, 1593  
 Lin, Min, **291**, 101  
 Lin, Qishui, **290**, 914  
 Lin, Shankung, **291**, 185; **296**, 710  
 Lin, Shel-Yio, **299**, 196  
 Lin, Shinne-Ren, **294**, 574  
 Lin, Ta-hsien, **291**, 1293  
 Lin, Xia, **293**, 307  
 Lin, Xueying, **290**, 1368  
 Lin, Yi Hsing, **293**, 456  
 Lin, Yiming, **294**, 597  
 Lin, Ying, **297**, 510  
 Lin, Zhengjiong, **297**, 1008  
 Lincoln, David W., **291**, 1001  
 Lind, Lars, **293**, 13  
 Lindahl, Anders, **291**, 951  
 Lindberg, M., **299**, 85  
 Linderkamp, Otwin, **291**, 237  
 Lindholm, Cecilia K., **296**, 929  
 Lindqvist, Ylva, **292**, 128  
 Lindsay, Andrew J., **292**, 909; **299**, 770  
 Lindvall, Jessica, **293**, 1319  
 Ling, Hong, **297**, 625  
 Ling, Wenhai, **293**, 1191  
 Link, Thomas A., **298**, 383  
 Liou, Jau-Cheng, **294**, 574  
 Lipke, Elizabeth A., **291**, 1014  
 Lipkin, V. M., **292**, 799  
 Lippe, G., **297**, 587  
 Lisdero, Constanza, **299**, 135  
 Lister, N., **296**, 918  
 Listman, James, **294**, 854  
 Little, Michael J., **295**, 682  
 Liu, Baohua, **293**, 1396; **294**, 161  
 Liu, Canhui, **290**, 602  
 Liu, De-Pei, **290**, 1079  
 Liu, Dongxu, **299**, 574  
 Liu, Feng, **294**, 136  
 Liu, Hen, **295**, 796  
 Liu, Hsiao-Sheng, **298**, 805  
 Liu, Hsin-tzu, **291**, 1293  
 Liu, Huitu, **299**, 880  
 Liu, Jian, **290**, 1206  
 Liu, Jian-Feng, **293**, 1174  
 Liu, Jian-Miao, **293**, 1174  
 Liu, Jianuo, **297**, 177  
 Liu, Jingmei, **297**, 1191  
 Liu, Johnson M., **291**, 628  
 Liu, Juinn-Lin, **292**, 422  
 Liu, Jun, **290**, 1255; **299**, 880  
 Liu, L., **293**, 167  
 Liu, Louis X., **291**, 908  
 Liu, Mingyao, **295**, 862; **296**, 206; **299**, 542, 606



- Liu, Ming-Yih, **294**, 60; **299**, 173  
 Liu, Qian, **290**, 91  
 Liu, Qiang, **290**, 998  
 Liu, Shiguang, **297**, 38  
 Liu, Shih-Tung, **292**, 789  
 Liu, Ta-Jen, **292**, 422  
 Liu, Tao, **295**, 14  
 Liu, Weidong, **297**, 1128  
 Liu, Weihong, **294**, 347  
 Liu, Xingge, **292**, 969  
 Liu, Xin-Hua, **290**, 249  
 Liu, Xin-Yuang, **290**, 1454  
 Liu, Ya-Chen, **291**, 185; **296**, 710  
 Liu, Yaw-Jen, **294**, 535  
 Liu, Yuqing, **293**, 1396; **294**, 161  
 Liu, Yu-Tien, **292**, 794  
 Liu, Zhenjiu, **291**, 1252  
 Livi, Carolina B., **297**, 870  
 Livingston, Edward, **290**, 602  
 Li Volti, Giovanni, **296**, 1077  
 Ljunggren, Östen, **293**, 451  
 Lloyd, Frank P., Jr., **290**, 552; **298**, 603  
 Lloyd, Matthew D., **292**, 66  
 Lochmuller, Hanns, **292**, 626  
 Lodge, Patricia A., **290**, 830  
 Loewen, Matthew E., **298**, 531  
 Löffelhardt, Wolfgang, **293**, 747  
 Löffler, Georg, **296**, 125  
 Logan, Barbara, **295**, 540  
 Lohaus, Christiane, **298**, 5  
 Lohmann, Suzanne M., **293**, 1438  
 Lombard, David B., **291**, 1119  
 Lombardi, Cinzia, **293**, 974  
 Long, Anthony D., **293**, 1262  
 Longin-Sauvageon, Christiane, **292**, 558  
 Loo, Britt-Marie, **290**, 146  
 Looije, Norbert, **295**, 1156  
 Lopes, A.R., **290**, 494  
 Lopes, Angela H.C.S., **293**, 1358  
 López, Ana C., **295**, 1000  
 Lopez, André, **295**, 610  
 Lopez-Berestein, Gabriel, **295**, 784  
 López-Botet, Miguel, **296**, 355  
 López-Calahorra, Francisco, **295**, 958  
 López-González, Ignacio, **299**, 562  
 López-Marure, Rebeca, **293**, 1028  
 López-Revilla, Rubén, **294**, 864  
 López-Soriano, Francisco J., **293**, 1145  
 Lopreiato, Raffaele, **296**, 1366  
 Lorberboum-Galski, Haya, **290**, 332  
 Lord, G.M., **295**, 475  
 Lord, J.M., **297**, 876  
 Lorenz, Mario, **291**, 542  
 Lorenzo, Lazaro, **295**, 81  
 Lorfe, Florence, **296**, 261  
 Lorico, Aurelio, **291**, 617  
 Lorusso, Vito, **293**, 100  
 Loryman, Chris J., **294**, 1161  
 Lotfi, Kourosh, **293**, 1489  
 Lou, Jueren, **297**, 116  
 Lou, Pei-Jen, **294**, 448  
 Louandre, Christophe, **293**, 1327  
 Lowery, David E., **291**, 313  
 Lowry, Clarice W., **293**, 1  
 Lozano, Jean-Claude, **291**, 406  
 Lu, Hsienwie, **291**, 908  
 Lu, Jun, **290**, 1521  
 Lu, Lihe, **293**, 1396; **294**, 161  
 Lu, Min, **290**, 249  
 Lu, Ping, **297**, 185  
 Lu, Shao-Chun, **296**, 48  
 Lu, William W., **298**, 121  
 Lu, Xiaohua, **297**, 1311  
 Lu, Yang, **299**, 74  
 Lu, Yi, **296**, 954  
 Lu, Yingchun, **296**, 1245  
 Lu, Yongbo, **293**, 1412  
 Lu, Yuquan, **295**, 1  
 Lubec, Gert, **291**, 62; **293**, 836; **296**, 970  
 Luberichs, Janina, **295**, 342  
 Luccioni, François, **292**, 390  
 Lucic, Melinda R., **290**, 1030  
 Lucka, Lothar, **292**, 749  
 Luckie, Douglas B., **293**, 1168  
 Lue, Tom F., **292**, 79; **295**, 1014  
 Luk, Keith D.K., **298**, 121  
 Lukoschek, Martin, **293**, 284  
 Lukyanetz, E.A., **293**, 132  
 Lundahl, Joachim, **296**, 255  
 Lundberg, Katarina, **291**, 1194  
 Lundberg, Mathias, **291**, 367  
 Lundberg, P., **299**, 85  
 Lundgren, Erik, **294**, 309  
 Lundgren, Stefan, **299**, 25  
 Lundin, Cecilia, **296**, 363  
 Lundwall, Åke, **290**, 452; **299**, 305  
 Lunec, Joe, **294**, 1161  
 Lunny, Declan P., **297**, 818  
 Lunter, Pim C., **296**, 904  
 Luo, Guang-ju, **290**, 469  
 Luo, Kaimei, **295**, 862; **296**, 206; **299**, 606  
 Luo, Kathy Q., **299**, 762  
 Luo, Qing-Ming, **291**, 1272  
 Luo, Yuxia, **291**, 908  
 Luo, Zhonghui, **296**, 954  
 Luo, Zong-Ping, **295**, 382  
 Luongo, Cindy L., **291**, 932  
 Luque, Alfonso, **293**, 501  
 Lurz, Rudi, **290**, 1583  
 Lüschen, Silke, **294**, 672  
 Lutfullah, Ghosia, **291**, 176  
 Luttun, Aernout, **295**, 428  
 Luyckx, Valerie, **291**, 261  
 Ly, C. Dune, **291**, 85  
 Lyle, Robert E., **290**, 1066  
 Lynis Dohm, G., **292**, 409  
 Lyons, Denise, **290**, 552  
 Lyons, Gary E., **293**, 881; **299**, 1  
 Lyons, Steve A., **290**, 1030  
 Lysova, Marina V., **298**, 37  
 Lyu, Ping-Chiang, **294**, 535  
 Maass, Nicolai, **297**, 125  
 Mabuchi, Tomotaka, **297**, 1171  
 Macario, Alberto J.L., **298**, 625  
 Macfarlane, Wendy M., **299**, 277  
 Machado-Domenech, Estela, **293**, 314  
 Machida, Takashi, **292**, 492  
 Machinal-Quelin, Florence, **293**, 622  
 Mackenzie, William, **294**, 191  
 MacLea, Kyle S., **292**, 415  
 MacLean, Paul S., **292**, 409  
 MacNeil, Tanya, **292**, 1075  
 Macoritto, Michael, **299**, 446  
 Macphee, Colin H., **290**, 707  
 Maddah, Suzan A., **295**, 1014  
 Maddala, Rupa Latha, **294**, 981  
 Madsen, Sara K., **294**, 132  
 Madyastha, K.M., **290**, 589; **297**, 202  
 Maeda, Akio, **297**, 1231  
 Maeda, Mamiko, **296**, 1279  
 Maeda, Masae, **296**, 716  
 Maeda, Norikazu, **292**, 781  
 Maeda, Noriko, **297**, 1344  
 Maeda, Shin, **291**, 868  
 Maeda, Takahiro, **296**, 1251  
 Maeda, Tomoji, **294**, 791; **296**, 1279  
 Maeda, Yasushi, **290**, 1042  
 Maeder, Caroline, **290**, 53  
 Maehara, Kayoko, **295**, 187  
 Maejima, Hiroshi, **295**, 452  
 Maekawa, Kazuyo, **297**, 517  
 Maekawa, Masahiko, **296**, 152  
 Maemoto, Atsuo, **296**, 1286  
 Maeng, Ji-Ung, **290**, 1176  
 Maeyama, Kazutaka, **297**, 111  
 Maffei Facino, Roberto, **298**, 699  
 Magga, Johanna M., **291**, 1232  
 Magge, S. S., **290**, 230  
 Maggi, Davide, **295**, 1085  
 Maggio, Bruno, **295**, 964  
 Magnelli, Lucia, **299**, 517  
 Magni, Giulio, **297**, 835  
 Maguire, Graham F., **290**, 391  
 Magzoub, M., **299**, 85  
 Mahboob-ul-hussain, **292**, 243  
 Mahlknecht, Ulrich, **293**, 182  
 Mahmud, Dolores, **297**, 760  
 Mahon, Elizabeth S., **290**, 1267  
 Maier, Bernhard, **294**, 926  
 Maik-Rachline, Galia, **290**, 682  
 Mailliard, Mark E., **290**, 1513  
 Maingret, François, **292**, 339  
 Mair, Lindsey, **294**, 191  
 Mairal, Aline, **291**, 286  
 Maitani, Tamio, **296**, 1207  
 Maitre-Boube, Martine, **294**, 764  
 Majchrzak, Beata, **291**, 744  
 Majeed, S., **297**, 876  
 Majer, Z.S., **293**, 18  
 Majima, Masataka, **294**, 441  
 Majumdar, M., **291**, 829  
 Mak, Ki M., **294**, 849; **299**, 459  
 Maki, Jun, **295**, 193  
 Maki, Kazuhiro, **299**, 116  
 Maki, Masatoshi, **290**, 510; **291**, 1166  
 Makifuchi, Takao, **293**, 1485  
 Makino, Mitsuhiro, **299**, 183  
 Makino, Yoshinori, **296**, 716  
 Makita, Zenji, **290**, 973; **296**, 877  
 Makriyannis, Alexandros, **290**, 91  
 Maksimenko, Andrei, **296**, 1000  
 Makuuchi, Masatoshi, **297**, 1058  
 Makyio, Hisayoshi, **296**, 8  
 Malakowsky, Christina A., **293**, 1566  
 Malamy, Michael H., **299**, 581  
 Maldonado, Elba Reyes, **293**, 1028  
 Maldonado, Monica L., **297**, 645  
 Malenfant, Patrick, **293**, 1544  
 Malerød, Lene, **299**, 916  
 Maleszewski, Joseph J., **293**, 1168  
 Malhotra, Vivek, **291**, 453  
 Malicka, Joanna, **294**, 886  
 Malki, Abdelharim, **296**, 749  
 Malkova, N.V., **292**, 799  
 Malléa, Monique, **293**, 1370  
 Mallery, Susan R., **295**, 1125  
 Mallo, Gustavo V., **290**, 641  
 Maloberti, Paula, **299**, 135  
 Malorni, Walter, **290**, 1393  
 Malvy, Claude, **293**, 18; **296**, 1000  
 Mammen, Joshua, **290**, 1  
 Manao, G., **296**, 692  
 Manarini, Stefano, **297**, 498  
 Mančák, Mateja, **292**, 880  
 Mancini, Patrizia, **298**, 559  
 Mandala, Suzanne M., **297**, 600  
 Mandel, Jean-Louis, **291**, 305  
 Mandine, Eliane, **298**, 185  
 Manenti, Stéphane, **294**, 976  
 Manfredi, Giovanni, **290**, 1593  
 Manfredi, Rosangela, **290**, 1564  
 Mani, S.A., **292**, 312  
 Manissolle, Chloé, **296**, 443  
 Mankertz, Joachim, **298**, 657  
 Man Leung, Yuk, **292**, 980  
 Mannaioni, Pier Francesco, **296**, 840  
 Mano, Hiroshi, **297**, 323  
 Manske, Paul R., **297**, 116  
 Manson, Jean, **291**, 372  
 Månsson, Emma, **293**, 1489; **298**, 338  
 Mantile-Selvaggi, Giuditta, **295**, 877  
 Many, Hiroshi, **291**, 1283  
 Mao, Haibin, **290**, 1128  
 Mao, Xiao-Quan, **292**, 776  
 Mao, Yumin, **291**, 414  
 Marana, S.R., **290**, 494  
 Marante, Jeny, **290**, 300  
 Marcheux, Virginie, **293**, 1327  
 Marchisio, Pier Carlo, **295**, 295  
 Marcus-Samuels, Bernice, **291**, 522  
 Marfaing, Renée, **296**, 507  
 Margara, Raul A., **292**, 102  
 Margaritis, Lukas H., **298**, 95  
 Mariani, Jean, **296**, 1317  
 Mariani, Maria L., **295**, 1000  
 Marie, Pierre J., **297**, 641  
 Marín, Mónica, **293**, 537

- Marin, Oriano, **296**, 1366  
 Marinari, U.M., **294**, 547  
 Marinosci, Felice, **292**, 161  
 Marjomäki, Varpu, **299**, 703  
 Marjoram, Robin, **293**, 647  
 Markaverich, Barry M., **291**, 692; **296**, 1083  
 Markaverich, David, **291**, 692  
 Marmé, Dieter, **297**, 934  
 Marnett, Lawrence J., **296**, 612  
 Marosky, Julie K., **293**, 691  
 Marrow, Jason D., **297**, 1135  
 Marshall, Ian C., **290**, 707  
 Martelli, Nicola, **297**, 498  
 Martel-Pelletier, Johanne, **291**, 1151  
 Marti, Amelia, **291**, 1201  
 Martin, Francis L., **293**, 1497  
 Martin, Michael U., **293**, 1472; **297**, 52  
 Martin, Pierre-Marie, **297**, 249  
 Martin, Roger A., **291**, 313  
 Martin, Sarah A., **293**, 578  
 Martín, Sergio F., **297**, 581  
 Martin, T. John, **290**, 42  
 Martinec, Jan, **293**, 766  
 Martinez, A.M., **293**, 1000  
 Martínez, J. Alfredo, **291**, 1201  
 Martínez, Jorge, **296**, 267  
 Martínez-Barriocanal, Águeda, **296**, 355  
 Martínez-Galisteo, Emilia, **295**, 1046  
 Martínez-Piñeiro, Luis, **296**, 580  
 Martínez-Poveda, Beatriz, **293**, 497  
 Martínez-Téllez, Miguel Angel, **290**, 577; **295**, 98  
 Martinou, Jean-Claude, **298**, 744  
 Martinov, Sergey G., **293**, 1405  
 Martiny, Laurent, **295**, 737  
 Maru, Yoshiro, **299**, 697  
 Marumo, Fumiaki, **291**, 385  
 Marunaka, Yoshinori, **298**, 619  
 Maruoka, H., **294**, 268  
 Maruyama, Atsushi, **298**, 10  
 Maruyama, Kei, **292**, 571; **293**, 1228  
 Maruyama, Tadashi, **291**, 769  
 Maruyama, Takaharu, **298**, 714  
 Maruyama, Yoshiko, **291**, 995  
 Marvin, Laure, **296**, 1186  
 März, Pia, **295**, 532  
 Marzocca, Cosimo, **296**, 840  
 Masaki, Tomoh, **299**, 91  
 Masamura, Katsuhiko, **293**, 1007; **297**, 375  
 Mascetra, Nicola, **297**, 498  
 Maseda, Hideaki, **292**, 513  
 Masella, Roberta, **290**, 1393  
 Maser, Edmund, **294**, 560  
 Masini, Emanuela, **296**, 840  
 Mason, Grant G.F., **291**, 501  
 Mason, Robert W., **293**, 23  
 Masotti, L., **290**, 1010; **293**, 1502  
 Masri, Bernard, **290**, 539  
 Massie, Bernard, **292**, 626  
 Mastick, Cynthia Corley, **290**, 1447  
 Mastunaga, Toshiyuki, **290**, 131  
 Masuda, Hisayo, **290**, 140  
 Masuda, Masako, **290**, 1022  
 Masuda, Yasushi, **293**, 396  
 Masui, Akio, **292**, 1087  
 Masumoto, Junya, **293**, 1314  
 Masuo, Yoshinori, **297**, 1339  
 Masutani, Hiroshi, **295**, 663  
 Mataka, Yuko, **295**, 300  
 Mathur, Manjula, **293**, 264  
 Mathur, Satya N., **294**, 238  
 Mathys, Kenneth C., **297**, 863  
 Matkó, János, **290**, 1169  
 Matoba, Kyoko, **297**, 749  
 Matoba, Tetsuya, **290**, 909  
 Matsubara, Etsuro, **292**, 571  
 Matsubara, Osamu, **296**, 54  
 Matsubara, Tatsuki, **297**, 997  
 Matsuda, Hideyasu, **298**, 433  
 Matsuda, Masaru, **297**, 632  
 Matsuda, Morihiro, **292**, 781  
 Matsuda, Sanae, **295**, 207  
 Matsuda, Satoru, **290**, 1123  
 Matsuda, Tadashi, **297**, 811  
 Matsuda, Tsukasa, **290**, 1037; **293**, 874  
 Matsuda, Yoshiko, **290**, 878  
 Matsubashi, Sachiko, **293**, 617  
 Matsui, Atsushi, **290**, 898  
 Matsui, Nobuo, **294**, 1121  
 Matsui, Takefumi, **292**, 138  
 Matsui, Toshimitsu, **298**, 87  
 Matsui, Toshitaka, **299**, 169  
 Matsukawa, Takashi, **294**, 261  
 Matsukura, Makoto, **293**, 1341  
 Matsukura, Norio, **296**, 152  
 Matsumi, Hirotaka, **292**, 456  
 Matsumiya, Tomoh, **292**, 274  
 Matsumoto, Akira, **294**, 42  
 Matsumoto, F., **295**, 630  
 Matsumoto, Ken, **295**, 663  
 Matsumoto, Kenji, **290**, 1220; **297**, 1282  
 Matsumoto, Kunio, **290**, 1315  
 Matsumoto, Misako, **290**, 140; **293**, 1364  
 Matsumoto, Naohiko, **296**, 313  
 Matsumoto, Osamu, **291**, 1297  
 Matsumoto, Satoru, **292**, 781  
 Matsumura, Sueo, **294**, 906  
 Matsumura, Tsuyoshi, **293**, 225; **299**, 693  
 Matsumura, Yasuko, **292**, 992  
 Matsumura, Tomoko, **294**, 635  
 Matsunaga, Hisami, **295**, 587  
 Matsuo, Masafumi, **293**, 421  
 Masuo, Osamu, **295**, 428  
 Matsuoka, Hiroshi, **298**, 87  
 Matsuoka, Ichiro, **298**, 591  
 Matsuoka, Kunio, **297**, 1332  
 Matsuoka, Masaaki, **295**, 621  
 Matsuoka, Kouji, **290**, 1022; **292**, 368; **294**, 602; **298**, 675  
 Matsushima, Teruhiko, **297**, 1291  
 Matsushima-Hibiya, Yuko, **296**, 20  
 Matsushita, Ikumi, **291**, 17  
 Matsushita, Kazunobu, **299**, 268  
 Matsushita, Tetsuro, **296**, 1251  
 Matsui, Mutsumi, **291**, 130  
 Matsuura, Fumihiko, **290**, 713  
 Matsuura, Kaoru, **297**, 368  
 Matsuya, Tokuzo, **297**, 32  
 Matsuyama, Akifumi, **290**, 713; **296**, 625  
 Matsuyama, Takami, **297**, 1238  
 Matsuzaka, Yasunari, **297**, 1171  
 Matsuzawa, Yuji, **290**, 713; **292**, 781; **296**, 625  
 Mattana, Joseph, **292**, 652  
 Mattivi, Fulvio, **296**, 631  
 Matuo, Yuhsi, **295**, 163  
 Matuszyk, Janusz, **294**, 1036  
 Mau, Hans, **293**, 284  
 Maurer, Alexander, **293**, 1377  
 Maury, Eric, **295**, 362  
 Mavelli, I., **297**, 587  
 May, James M., **292**, 45  
 May, Julie S., **290**, 1066  
 Mayanagi, Kouta, **297**, 749  
 Mayatepek, Ertan, **293**, 269  
 Mayerhofer, Peter U., **291**, 1180  
 Mayo, Stephen L., **296**, 988  
 Maysinger, Dusica, **291**, 649  
 Mazarguil, Honoré, **290**, 539; **295**, 610  
 Mazda, Osam, **291**, 48, 855; **293**, 1530  
 Mazella, Jean, **298**, 760  
 Mazière, Cécile, **293**, 1327  
 Mazière, Jean-Claude, **293**, 1327  
 Mazzinghi, B., **296**, 692  
 Mazzola, Francesca, **297**, 835  
 Mazzon, Cristina, **293**, 258  
 M'Barek, Sarah, **291**, 640  
 Mbemba, Elisabeth, **296**, 507  
 McCaffrey, Mary W., **292**, 909; **299**, 770  
 McCaig, C., **294**, 988, 995  
 McCairn, Mark, **296**, 857  
 McCarthy, Kevin M., **292**, 427  
 McCarty, Ida M., **295**, 129, 136; **296**, 281  
 McCauley, Patrick, **296**, 857  
 McCloud, Thomas G., **296**, 1228  
 McCutchen-Maloney, Sandra L., **290**, 1328  
 McDonagh, Antony F., **293**, 1077  
 McDonald, Kenneth J., **290**, 438  
 McDonald, Melisenda J., **293**, 1354  
 McDougal, Andrew, **294**, 384  
 McGarry, Michelle A., **294**, 101  
 McGehee, Robert E., Jr., **290**, 1066; **296**, 1340  
 McGurk, S., **290**, 844  
 McIntosh, Christopher H.S., **291**, 1302; **296**, 229  
 McIntyre, Thomas M., **292**, 274  
 McKean, David J., **297**, 645  
 McKercher, Ginette, **295**, 682  
 McKnight, Nathan L., **299**, 258  
 McLachlan, Sandra M., **295**, 1118  
 McLarnon, Stuart J., **297**, 71  
 McLaughlin, John T., **297**, 1089  
 McLean, W.H. Irwin, **297**, 818  
 McMullan, Geoffrey, **290**, 802  
 McNeish, John D., **290**, 839  
 McNiven, Mark, **294**, 261  
 McPherson, Deanne B., **296**, 413  
 Means, Anthony R., **293**, 892  
 Medh, Jheem D., **293**, 274  
 Medina, Jose D., **297**, 943  
 Medina, Miguel Ángel, **293**, 497  
 Medrano, Theresa, **294**, 101  
 Meegalla, Rupali L., **298**, 317  
 Meenakshi, J., **291**, 829  
 Meeusen, Tom, **297**, 1140; **299**, 312  
 Meguro, Makiko, **290**, 1499  
 Mehan, Kate A., **294**, 301  
 Mehta, Jawahar L., **291**, 349  
 Mei, Hui-Ching, **291**, 165  
 Mei, Nan, **297**, 924  
 Meier, Mirjam, **295**, 597  
 Meighen, Edward A., **293**, 456  
 Meiners, Silke, **291**, 542  
 Meissner, Thomas, **293**, 269  
 Meister, Björn, **291**, 1038  
 Melaine, Nathalie, **291**, 286  
 Melchionda, Salvatore, **296**, 685  
 Melhus, Håkan, **293**, 13  
 Melino, Gerry, **291**, 1123  
 Melkani, Girish C., **294**, 893  
 Meller, Ruth, **290**, 624  
 Melloni, E., **294**, 547  
 Mellor, Howard R., **290**, 1361  
 Melo, Eurico, **296**, 596  
 Memon, Riaz A., **295**, 249  
 Mena Barreto Silva, Fátima R., **298**, 414  
 Menck-Le Bourhis, Celeste, **290**, 53  
 Mendoza, Criselda, **293**, 1028  
 Mendoza, Jose A., **294**, 893  
 Mendoza-Figueroa, Tomas, **294**, 864  
 Mendoza-Lujambio, Irene, **297**, 737  
 Mendoza-Wilson, Ana Ma., **290**, 577  
 Menéndez, Ivón, **290**, 300  
 Meng, Fanwei, **290**, 1411  
 Meng, Xiangbing, **297**, 1191  
 Mentele, Reinhard, **294**, 879; **291**, 635  
 Mercalli, Elena, **296**, 515  
 Merckx, R., **291**, 528  
 Meredith, Elizabeth, **294**, 1161  
 Meredith, Jere E., **299**, 569  
 Meredith, Jere E., Jr., **299**, 744  
 Mertens, Inge, **297**, 1140  
 Meshalkina, Ludmilla E., **294**, 155  
 Mesnil, M., **294**, 108  
 Mesquita, Rafael D., **293**, 1358  
 Messina, Irene, **294**, 829



- Messing, Edward M., **294**, 700  
 Meucci, Elisabetta, **294**, 829  
 Meyer, Giuliano, **290**, 1564  
 Meyer, Grit, **291**, 966  
 Meyer, Helmut E., **298**, 5  
 Meyer, Jörg, **295**, 975  
 Meyer, Urs A., **291**, 378  
 Meyermann, Richard, **298**, 520  
 Mezey, Esteban, **297**, 906  
 Mhatre, Anand N., **297**, 987  
 Miao, Hui, **292**, 892  
 Micales, Bruce, **293**, 881  
 Michel, Beate, **293**, 30  
 Michelsen, Birgitte Koch, **295**, 243  
 Michely, Beate, **292**, 749  
 Michon, Ingrid N., **293**, 1279  
 Mielcarek, Michal, **294**, 145  
 Miele, Gino, **291**, 372  
 Miele, Lucio, **295**, 877  
 Miera, Verma, **297**, 361  
 Mierke, Dale F., **293**, 1053  
 Migita, Keisuke, **295**, 849  
 Migita, Kiyoshi, **296**, 26  
 Mignot, E., **294**, 615  
 Mignotte, Bernard, **298**, 282  
 Miguel, Angel, **290**, 517  
 Mihara, Katsuyoshi, **292**, 153  
 Miike, Teruhisa, **293**, 1341  
 Mikala, Gabor, **293**, 1405  
 Mikami, Koji, **290**, 339  
 Miki, Hiroaki, **291**, 41; **293**, 93; **297**, 214  
 Miki, Tohru, **291**, 567  
 Mikoshiba, Katsuhiko, **293**, 899  
 Mikovits, Judy A., **296**, 1228  
 Mikulík, Karel, **299**, 335  
 Mikuni, Osamu, **298**, 144  
 Milani, Mario, **294**, 1064  
 Millenbaugh, Nancy, **292**, 41  
 Miller, Frederick W., **294**, 609  
 Miller, Marilyn M., **299**, 446  
 Miller-Torbert, Tracey, **298**, 75  
 Milligan, James, **297**, 600  
 Millot, Claire, **295**, 610  
 Mills, Thomas M., **298**, 427  
 Mimura, Junsei, **290**, 984  
 Min, Wongi, **299**, 321  
 Minagawa, Sachi, **293**, 293  
 Minakata, Hiroyuki, **291**, 1187  
 Minami, Mutsuhiko, **296**, 194  
 Minami, Yasuhiro, **290**, 225  
 Minamoto, Toshifumi, **290**, 280  
 Mine, Yoshinori, **292**, 1070  
 Minoura, Katsuhiko, **294**, 210  
 Miron, Talia, **290**, 775  
 Mischak, Harald, **290**, 85  
 Mishima, Wataru, **297**, 1324  
 Mishima, Yukio, **290**, 16  
 Mishina, Masayoshi, **293**, 953; **296**, 492  
 Mishra, Prasunkumar J., **292**, 468  
 Mishto, Michele, **299**, 539  
 Misiti, Francesco, **294**, 829  
 Misquith, Sandra, **296**, 1180  
 Missiaen, Ludwig, **294**, 249  
 Misugi, Susumu, **290**, 713  
 Misumi, Shogo, **293**, 1107  
 Mita, Shuji, **290**, 1042  
 Mita, Yusaku, **291**, 210  
 Mitaku, Shigeki, **290**, 23  
 Mitamura, Keiji, **290**, 1289  
 Mitani, Hiroshi, **293**, 327  
 Mitani, Kinuko, **299**, 116  
 Mitani, Kohnosuke, **297**, 523  
 Mitani, Shohei, **293**, 698  
 Mitchell, Jennifer W., **298**, 133  
 Mitchell, Thomas J., **299**, 744  
 Mitcheson, J.S., **297**, 302  
 Mitrani-Rosenbaum, Stella, **294**, 1169  
 Mitsui, Kazutaka, **290**, 1260  
 Mitsuno, Yuzo, **291**, 868  
 Mitsuoka, Kaoru, **295**, 756  
 Mittal, Rohit, **294**, 395  
 Miura, Chisa, **295**, 657  
 Miura, Kazunori, **294**, 1040  
 Miura, Koshiro, **291**, 361  
 Miura, Masahiko, **296**, 62  
 Miura, Masako, **291**, 987  
 Miura, Masayuki, **290**, 1275  
 Miura, Osamu, **291**, 567, 744; **297**, 17, 1245  
 Miura, Shin-ichiro, **298**, 587  
 Miura, Shinji, **296**, 395  
 Miura, Tomisato, **298**, 646  
 Miura, Yasuo, **297**, 664  
 Miura, Yutaka, **299**, 693  
 Miwa, Masao, **292**, 492  
 Miwa, Yoshihiro, **292**, 957  
 Miyachi, Yoshiki, **291**, 780  
 Miyagi, Tomoko, **296**, 477  
 Miyagishima, Hiro, **293**, 1132  
 Miyagoe-Suzuki, Yuko, **293**, 1265  
 Miyahara, Yoshiyuki, **296**, 32  
 Miyake, Kensuke, **293**, 1364  
 Miyake, Shin-ichi, **295**, 463  
 Miyake, Yasunobu, **290**, 268  
 Miyakoshi, Junji, **292**, 355  
 Miyamori, Isamu, **293**, 1007; **297**, 375  
 Miyamoto, Carol, **293**, 456  
 Miyamoto, Kaoru, **297**, 368  
 Miyamoto, Kazuhisa, **293**, 653  
 Miyamoto, Shigeaki, **291**, 41  
 Miyamoto, Yasuhisa, **298**, 714  
 Miyamoto, Yuki, **296**, 85  
 Miyanari, Yusuke, **293**, 993  
 Miyano, Masashi, **290**, 421  
 Miyasaka, Hitoshi, **293**, 653  
 Miyasaka, Nobuyuki, **291**, 567; **297**, 1245  
 Miyashiro, Masahiko, **292**, 659  
 Miyashita, Taiichiro, **296**, 26  
 Miyashita, Toshiyuki, **291**, 484; **293**, 1254  
 Miyata, Shinichi, **293**, 806  
 Miyata, Toshiyuki, **296**, 537; **299**, 847  
 Miyauchi, Jun, **291**, 484  
 Miyazaki, Hiromi, **296**, 395  
 Miyazaki, Koyomi, **298**, 198  
 Miyazaki, Masahiro, **298**, 24  
 Miyazaki, Shunichi, **292**, 8  
 Miyazaki, Toru, **291**, 1265  
 Miyazaki, Wataru, **299**, 384  
 Miyazaki, Yoshiyuki, **295**, 547  
 Miyazawa, Keiji, **290**, 475  
 Miyoshi, Hidetaka, **297**, 1277  
 Miyoshi, Ichiro, **294**, 280  
 Mizoi, Lena, **299**, 395  
 Mizuguchi, Hiroyuki, **297**, 779  
 Mizukami, Junko, **297**, 1277  
 Mizukami, Tamio, **298**, 144  
 Mizuma, Hiroshi, **292**, 133  
 Mizumachi, Koko, **299**, 813  
 Mizumoto, Kiyohisa, **295**, 621  
 Mizuno, Hiroshi, **290**, 421  
 Mizuno, Yosuke, **290**, 1499  
 Mizutani, Chisato, **297**, 664  
 Mizutani, Masaharu, **294**, 1087  
 Mizutani, Shigehiko, **290**, 1048  
 Mizutani, Tetsuya, **297**, 368  
 Moan, Johan, **297**, 468  
 Mobberley, Margaret A., **292**, 102  
 Möbus, Eric, **294**, 560  
 Mochida, Naoko, **292**, 992  
 Mochizuki, Chikako, **297**, 323  
 Mogas, Teresa, **297**, 841  
 Mohamed-Hadley, Alisha, **292**, 860  
 Mohapatra, Anasuya, **299**, 751  
 Mohindra, Atul, **297**, 10  
 Mohri, Shirou, **294**, 280  
 Moisand, André, **290**, 1151  
 Mojžita, Dominik, **296**, 664  
 Molander, Catrin, **296**, 604  
 Molenaar, Tom J.M., **293**, 1279  
 Molina, Alfredo, **295**, 582  
 Molinas, Catherine, **290**, 851  
 Moll, Isabella, **297**, 1021  
 Momose, Yumiko, **293**, 45  
 Momparler, Richard L., **293**, 1478  
 Momynaliev, K.T., **293**, 155  
 Monahan, Steven J., **290**, 830  
 Mondal, Tapan K., **290**, 1336  
 Mondesert, Odile, **295**, 673  
 Mondola, Paolo, **295**, 603  
 Mondovi, Bruno, **296**, 840  
 Mongkolsuk, Skorn, **297**, 968; **299**, 177  
 Monji, Mikio, **294**, 734  
 Monory, Krisztina, **292**, 231  
 Monostory, Katalin, **291**, 1089  
 Montañó, Luis Felipe, **293**, 1028  
 Montenarh, Mathias, **296**, 13  
 Montessuit, Sylvie, **298**, 744  
 Monti, Daniela, **299**, 539  
 Monzen, Koshiro, **298**, 493  
 Monzón, María E., **299**, 739  
 Moobed, Minoo, **291**, 542  
 Moon, Haejeong, **290**, 457  
 Moon, Jae-Hak, **293**, 1458  
 Moon, Jeong Chan, **296**, 1152  
 Moon, Tae-Wha, **295**, 818  
 Moonga, Baljit S., **299**, 505  
 Moons, Lieve, **295**, 428  
 Moore, Gary B.T., **290**, 707  
 Moores, Kitty, **290**, 707  
 Morales, Juan, **290**, 300; **295**, 81; **296**, 1303  
 Morales, Michael J., **295**, 223  
 Moran, Graham R., **292**, 639  
 Moran, Oscar, **291**, 1095  
 Morand, Olivier, **297**, 261  
 Morawietz, Henning, **294**, 541; **295**, 1057  
 Morby, Andrew P., **299**, 438  
 Moreau, Colette, **291**, 400  
 Moreno, Maria João, 596  
 Moreno-Aliaga, María J., **291**, 1201  
 Morford, Lorri A., **295**, 540  
 Morgalla, Matthias H., **298**, 520  
 Morgan, B. Paul, **293**, 714  
 Mori, Daisuke, **298**, 156  
 Mori, Giorgio, **297**, 442  
 Mori, Hidemi, **290**, 498  
 Mori, Hisashi, **293**, 953; **296**, 492  
 Mori, Hitoshi, **293**, 874  
 Mori, Ichiro, **290**, 1483  
 Mori, Ikuo, **297**, 1332  
 Mori, Kaoru, **299**, 160  
 Mori, Kazuhisa, **296**, 785  
 Mori, Masatomo, **292**, 492  
 Mori, Nozomu, **290**, 415  
 Mori, Seiichiro, **296**, 651  
 Mori, Seiji, **294**, 231  
 Mori, Shin-ichiro, **295**, 300  
 Mori, Takahiro, **291**, 48  
 Mori, Tatsuya, **290**, 1037  
 Mori, Toshiyuki, **292**, 1036; **294**, 184  
 Mori, Tsutomu, **296**, 530  
 Mori, Yoshiko, **292**, 13  
 Morii, Eiichi, **290**, 1250; **297**, 111  
 Morii, Tsukasa, **298**, 345  
 Morikawa, Keiko, **290**, 909  
 Morikawa, Kosuke, **297**, 749  
 Morimatsu, Fumiki, **293**, 1348  
 Morimoto, Akira, **294**, 5; **295**, 306  
 Morimoto, Ko-ichi, **292**, 999  
 Morinaga, Tomonori, **294**, 630  
 Morio, Hidenori, **292**, 999  
 Morioka, Mizue, **292**, 263  
 Morisaki, Nobuhiro, **294**, 231  
 Morisaki, Shinsuke, **298**, 619  
 Morishita, Kazuhiro, **292**, 609  
 Morita, Masashi, **291**, 1245  
 Morita, Noriyoshi, **293**, 1242  
 Morita, Tomoyuki, **296**, 497  
 Morita, Yasutaka, **294**, 1138  
 Morita, Yutaka, **292**, 456  
 Moritani, Maki, **292**, 138  
 Moriwaki, Chizu, **294**, 359  
 Moriya, Hideshige, **295**, 501  
 Moriyama, Keiji, **293**, 247  
 Morizono, Hiroki, **299**, 581  
 Mornon, Jean-Paul, **293**, 1153  
 Moro, Luigi, **299**, 424  
 Moroder, Luis, **293**, 1053  
 Morohashi, Ken-ichirou, **297**, 632  
 Morohashi, Masaaki, **299**, 857  
 Morón, José A., **290**, 1545  
 Moroni, Emanuela, **295**, 267  
 Morris, Julie, **297**, 506  
 Morris, Sidney M., Jr., **294**, 749  
 Morrow, Jason D., **292**, 45  
 Morse, Mark A., **295**, 1125



- Mosberg, Henry I., **293**, 1233  
 Moser, Arthur H., **293**, 145  
 Moser, René, **292**, 841  
 Mosi, R., **292**, 519  
 Moskovitz, Jakob, **290**, 62; **297**, 956  
 Mosley, Amber L., **295**, 724  
 Mossink, Marieke H., **291**, 535  
 Motley, Evangeline D., **294**, 1023  
 Motohashi, Ken, **296**, 8  
 Motoya, Toshiro, **291**, 806  
 Motoyama, Noboru, **299**, 863  
 Motoyoshi, Kazuo, **296**, 1215  
 Mou, Chun-yan, **299**, 74  
 Moucadel, Virginie, **297**, 607  
 Mounier, Y., **296**, 1267  
 Moura da Silva, Ana Maria, **294**, 879  
 Mourão, Paulo A.S., **298**, 403  
 Mourtzakakis, Marina, **298**, 309  
 Movsesyan, Vilen A., **299**, 201  
 Moyer, Leah, **299**, 587  
 Mrowietz, Ulrich, **297**, 1211  
 Mu, Junwu, **292**, 675  
 Mueller, A.G., **292**, 113  
 Muhlenkamp, Christy R., **293**, 549  
 Muir, April Q., **293**, 1  
 Mukai, Kiyoshi, **290**, 984  
 Mukai, Yasushi, **290**, 909  
 Mukherjee, Anil B., **295**, 877  
 Mukherjee, Shyamali, **297**, 1043  
 Mukhopadhyay, Chaitali, **292**, 579  
 Mukobata, S., **297**, 722  
 Mullaney, Edward J., **290**, 1343; **297**, 1016  
 Müller, Heidi, **293**, 665  
 Müller, Miklós, **293**, 633  
 Müller, Mario M., **292**, 749  
 Müller, Ralf, **294**, 496  
 Müller, Stefan, **296**, 870  
 Mun, Kyo Cheol, **290**, 1506  
 Mundt, Steven, **294**, 88  
 Munsey, Tim S., **297**, 10  
 Muntau, Ania C., **291**, 1180  
 Murai, Masatoshi, **296**, 544  
 Murakami, Hideki, **294**, 642  
 Murakami, Jumpei, **296**, 1329  
 Murakami, Kazuma, **294**, 5; **295**, 306  
 Murakami, Kazuya, **295**, 917  
 Murakami, Makoto, **292**, 689  
 Murakami, Shinya, **297**, 329  
 Murakami, Tadashi, **295**, 945  
 Murakami, Yohei, **291**, 758  
 Murakumo, Yoshiki, **290**, 409  
 Muramatsu, Akira, **291**, 48  
 Muramatsu, Masami, **290**, 1108  
 Muramatsu, Tatsuo, **292**, 88  
 Muramoto, Koji, **291**, 758  
 Muramoto, Tamaki, **294**, 280  
 Murata, Kazumoto, **297**, 59  
 Murata, Ken, **296**, 118  
 Murata, Norio, **290**, 339  
 Murata, Takashi, **293**, 489; **294**, 714; **299**, 247  
 Murata, Tomiyasu, **293**, 1242  
 Murata, Yoshiharu, **293**, 680  
 Murata, Yuji, **292**, 675  
 Murayama, Tsugiyu, **296**, 651  
 Muroya, Takahiro, **296**, 32  
 Murphy, Gillian, **293**, 501  
 Murphy, Gloria A., **290**, 1328  
 Murphy, Kevin, **291**, 1208  
 Murphy, Timothy, **292**, 812  
 Murray, James L., **292**, 449  
 Murrells, Annabel, **294**, 380  
 Murugan, R., **293**, 870  
 Musacchio, Alexis, **290**, 300; **295**, 81  
 Mushlin, Philip S., **291**, 433  
 Musiani, Piero, **297**, 498  
 Musse, Nadine, **292**, 1031  
 Musumeci, Olimpia, **293**, 521  
 Muth, James N., **293**, 1405  
 Muto, Tsuyoshi, **290**, 1478  
 Mutoh, Hiroyuki, **294**, 470  
 Myers, Allen C., **291**, 111  
 Myers, Todd E., **291**, 979  
 Myette, James, **290**, 1206; **290**, 1214  
 Mykkänen, Juha, **291**, 1173  
 Myskowski, Sandy M., **299**, 730  
 Myśliwski, Andrzej, **292**, 333  
 Na, Xi, **294**, 700  
 Naccache, Paul H., **296**, 759  
 Nachman, R.J., **299**, 312  
 Nada, Shigeyuki, **294**, 1151  
 Nadler, Jerry L., **293**, 1092  
 Nagahama, Masami, **290**, 878  
 Nagahama, Yoshitaka, **297**, 632  
 Nagahata, Hajime, **293**, 1571  
 Nagahata, Tomoyuki, **292**, 368  
 Nagai, Hiroichi, **292**, 689  
 Nagai, Hirokazu, **293**, 1420  
 Nagai, Hiroshi, **294**, 760, 1109  
 Nagai, Kaoru, **294**, 42; **295**, 376  
 Nagai, Kazuo, **290**, 268; **292**, 94; **295**, 92  
 Nagai, Masaaki, **295**, 74  
 Nagai, Ryoza, **293**, 332; **297**, 1058; **298**, 493  
 Nagai, Shigenori, **292**, 368  
 Nagaki, Sumiko, **292**, 268  
 Nagakura, Tadashi, **298**, 779  
 Nagamine, Kentaro, **290**, 1195  
 Nagano, Akira, **290**, 381  
 Nagano, Makoto, **290**, 713  
 Nagano-Fujii, Motoko, **299**, 366  
 Naganuma, Seiji, **290**, 1096  
 Nagao, Masaya, **290**, 865; **294**, 5; **295**, 306; **296**, 145  
 Nagao, Taku, **291**, 995  
 Nagaoka, Makoto, **296**, 553  
 Nagaoka, Megumi Hamano, **296**, 1207  
 Nagaraj, R., **298**, 203  
 Nagaraj, Ram H., **297**, 863  
 Nagaretani, Hiroyuki, **292**, 781  
 Nagasaki, Koichi, **297**, 125  
 Nagasawa, Toshiro, **292**, 609  
 Nagase, Hisamitsu, **293**, 192  
 Nagase, Tomoko, **292**, 109  
 Nagashima, Kayo, **297**, 1108  
 Nagashima, Kazuo, **293**, 969, 1084; **294**, 509; **296**, 716  
 Nagashima, Masato, **294**, 199  
 Nagashima, Takahiro, **291**, 628  
 Nagashima, Tatsuya, **291**, 669  
 Nagata, Aki, **298**, 87  
 Nagata, Michio, **290**, 177  
 Nagata, Satoshi, **294**, 813  
 Nagata, Tetsu, **294**, 42  
 Nagata, Yuka, **290**, 865  
 Nagatsu, Toshiharu, **293**, 962  
 Nagawa, Hirokazu, **292**, 347  
 Nagayama, Hitomi, **298**, 731  
 Nagayoshi, Ryusaku, **297**, 1238  
 Nagel, David, **290**, 1558  
 Naggi, Annamaria, **292**, 222  
 Nagoshi, Emi, **297**, 779  
 Nagoya, Takao, **293**, 542  
 Nagy, Christine, **293**, 747  
 Nagy, Scott R., **296**, 799  
 Nah, Seung-Yeol, **296**, 247  
 Nahon, Jean-Louis, **295**, 841  
 Naiki, Hironobu, **293**, 1007  
 Naito, Kunihiko, **292**, 709  
 Naito, Shinji, **291**, 130  
 Naito, Yasuhito, **297**, 997  
 Naito, Yuko, **290**, 1123  
 Naka, Daiji, **290**, 475  
 Naka, Kazuhito, **299**, 863  
 Nakada, Akiko, **297**, 1282  
 Nakae, Taiji, **292**, 513  
 Nakagawa, Hiroshi, **292**, 94  
 Nakagawa, Hiroyuki, **291**, 41  
 Nakagawa, Ichiro, **296**, 1329  
 Nakagawa, Rinako, **299**, 669  
 Nakagawa, Takahito, **295**, 501  
 Nakagawa, Takefumi, **299**, 91  
 Nakagawa, Yoshihito, **294**, 363  
 Nakagawa, Youji, **291**, 707  
 Nakagawa-Toyama, Yumiko, **296**, 625  
 Nakagawara, Akira, **295**, 501  
 Nakagomi, Kazuya, **295**, 587  
 Nakagomi, Yoshiko, **292**, 362  
 Nakahara, Takehisa, **292**, 355  
 Nakai, Tomonori, **295**, 458  
 Nakajima, Daisuke, **290**, 1260  
 Nakajima, Masatoshi, **293**, 489  
 Nakajima, Takuma, **297**, 17  
 Nakajima, Terumi, **293**, 1514; **294**, 760  
 Nakajima, Toshihiro, **292**, 274  
 Nakakoshi, Masamichi, **294**, 630  
 Nakamata, Takeharu, **295**, 354  
 Nakamichi, Noritaka, **292**, 200  
 Nakamoto, Hitoshi, **297**, 616  
 Nakamoto, Tetsuya, **294**, 635  
 Nakamura, Toshikazu, **290**, 1315  
 Nakamura, Hideji, **297**, 1128  
 Nakamura, Hideshi, **290**, 1037  
 Nakamura, Junzo, **294**, 46  
 Nakamura, Katsunori, **293**, 969  
 Nakamura, Kazuhiko, **290**, 121  
 Nakamura, Kazuo, **295**, 193  
 Nakamura, Kenji, **297**, 433  
 Nakamura, Kentarou, **293**, 120  
 Nakamura, Koichiro, **294**, 429  
 Nakamura, Machiko, **291**, 494  
 Nakamura, Manabu T., **290**, 1295; **296**, 111; **299**, 832  
 Nakamura, Michitsugu, **290**, 1255  
 Nakamura, Misa, **290**, 1483  
 Nakamura, Mitsuhiko, **290**, 1037  
 Nakamura, Motoyuki, **297**, 1238  
 Nakamura, Shugo, **296**, 497  
 Nakamura, Shun, **295**, 651  
 Nakamura, Shun-ichi, **294**, 1109  
 Nakamura, Takanori, **296**, 644  
 Nakamura, Takao, **298**, 714  
 Nakamura, Takashi, **295**, 354; **299**, 91  
 Nakamura, Tatsuji, **298**, 714  
 Nakamura, Toshinobu, **290**, 858  
 Nakamura, Toshiya, **298**, 646  
 Nakamura, Yasushi, **290**, 1483  
 Nakamura, Yohko, **295**, 501  
 Nakamura, Yuichi, **295**, 74; **299**, 116  
 Nakamura, Yusuke, **290**, 381; **292**, 498  
 Nakanishi, Hiroshi, **297**, 1011  
 Nakanishi, Hiroyuki, **293**, 45; **299**, 472  
 Nakanishi, Mahito, **297**, 779  
 Nakanishi, Makoto, **293**, 753  
 Nakanishi, Takeo, **291**, 291  
 Nakanishi, Tohru, **299**, 755  
 Nakano, Akihiko, **296**, 560  
 Nakano, Hiroyasu, **299**, 488  
 Nakano, Kenji, **292**, 474  
 Nakano, Naoko, **299**, 148  
 Nakano, Takeshi, **297**, 59  
 Nakano, Tsuyoshi, **296**, 20  
 Nakano, Yoshimi, **291**, 1166  
 Nakano, Yoshio, **292**, 964  
 Nakao, Kazuhiko, **294**, 414  
 Nakao, Kazuwa, **291**, 987  
 Nakaoka, Rie, **298**, 646  
 Nakashima, Emiko, **298**, 24  
 Nakashima, Izumi, **292**, 826  
 Nakashima, Katsuhiko, **290**, 979  
 Nakashima, Koto, **296**, 26  
 Nakashima, Masahiro, **291**, 130  
 Nakashima, Mikiro, **294**, 46  
 Nakashima-Matsushita, Noriko, **297**, 1238  
 Nakasu, Syo, **297**, 749  
 Nakata, Keisuke, **294**, 414  
 Nakata, Koh, **291**, 17  
 Nakata, Miho, **290**, 510  
 Nakata, Mitsuo, **290**, 546  
 Nakata, Mitsuyuki, **290**, 510  
 Nakata, Rika, **292**, 133  
 Nakatani, Sachie, **297**, 323  
 Nakatani, Teruyo, **296**, 395  
 Nakatsura, Tetsuya, **294**, 734  
 Nakayama, Haruyuki, **295**, 917  
 Nakayama, Hitoshi, **295**, 319  
 Nakayama, Kazuhisa, **294**, 254  
 Nakayama, Kei-Ichi, **290**, 1399  
 Nakayama, Manabu, **290**, 1260  
 Nakayama, Masafumi, **299**, 488

- Nakayama, Satoshi, **290**, 23  
 Nakayama, Susumu, **296**, 1251  
 Nakayama, Tatsuo, **299**, 263  
 Nakayama, Tomitaka, **295**, 354  
 Nakayama, Tomohiro, **297**, 1135  
 Nakayama, Toru, **293**, 1389; **297**, 1096  
 Nakayama, Toshiyuki, **291**, 130  
 Nakayama, Yoshifumi, **295**, 945  
 Nakazawa, Atsushi, **291**, 361  
 Nalbantoglu, Josephine, **292**, 626  
 Nałęcz, Katarzyna A., **294**, 823  
 Nam, Kang Hoon, **293**, 1453  
 Namiki, Akiyoshi, **294**, 199  
 Nanashima, Naoki, **298**, 646  
 Naoki, Hideo, **293**, 1514  
 Nara, Takayuki Y., **296**, 111; **299**, 832  
 Narita, Ichiei, **296**, 497  
 Narita, Takuma, **298**, 345  
 Naruse, Kiyoshi, **293**, 327  
 Naruse, Takeshi, **292**, 667  
 Naruse, Yoshihisa, **290**, 415  
 Nash, G.B., **295**, 1150  
 Nasonkin, Igor O., **295**, 312  
 Nasr, Fahd, **291**, 875  
 Natarajan, Pradeep, **297**, 206  
 Natarajan, Viswanathan, **292**, 325  
 Nathanson, Michael H., 719  
 Natori, Takeshi, **297**, 1058  
 Natori, Yasuo, **298**, 235  
 Nauze, Michel, **295**, 362  
 Navadgi, Vasundhara M., **296**, 983  
 Navara, Christopher S., **292**, 987  
 Navarrete Santos, Alexander, **295**, 423  
 Navarro, Valérie, **298**, 760  
 Navas, Plácido, **297**, 581  
 Navder, Khursheed P., **291**, 1109  
 Navenot, Jean-Marc, **292**, 449  
 Navolotskaya, E. V., **292**, 799  
 Nawachi, Kumiko, **299**, 755  
 Nawoschik, Stanley, **294**, 655  
 Nawrath, Hermann, **291**, 421  
 Naylor, Ruth L., **291**, 501  
 Naz, Rajesh K., **297**, 1075  
 Nazarov, Igor B., **297**, 1318  
 Necchi, Vittorio, **292**, 167  
 Nedelkov, Dobrin, **297**, 401  
 Neesen, Jürgen, **297**, 737  
 Negishi, Manabu, **290**, 162  
 Negishi, Masahiko, **292**, 492  
 Neilson, Eric G., **295**, 401  
 Nel, Andre E., **291**, 444  
 Nelson José, **293**, 566  
 Nelson, Randall W., **297**, 401  
 Nemoto, Nobuo, **297**, 1297  
 Nemoto, Takahiro, **296**, 1164  
 Nesburn, Anthony B., **295**, 668  
 Neticadan, Thomas, **293**, 727  
 Netzer, Christian, **296**, 870  
 Neubig, Richard R., **293**, 1233  
 Neufeld, Edward B., **297**, 974  
 Neuhaus, Thomas J., **292**, 1044  
 Neuheiser, Frank, **292**, 1044  
 Neuman, Isabel, **299**, 135  
 Neuman-Silberberg, F. Shira, **291**, 732  
 Neumann, Susanne, **290**, 1084  
 Neuzil, Jiri, **290**, 988; **293**, 1309  
 Neves, Mónica S., **292**, 741  
 Newcomb, Lisa F., **290**, 1447  
 Newman, Debra K., **296**, 1171  
 Newman, Peter J., **296**, 1171  
 Newman, Suzanna J., **290**, 707  
 Neyts, Johan, **297**, 756  
 Nezic, Mark G., **295**, 387  
 Ng, Raymond W.M., **294**, 120  
 Ng, T.B., **290**, 563, 813; **293**, 857  
 Nguyen, Khue Vu, **291**, 764  
 Nguyen, Mai, **290**, 602  
 Nguyen, Myhanh, **298**, 537  
 N'Guyen, Quoc-Binh, **297**, 249  
 Nguyen, Thang, **293**, 1092  
 Nham, Sang-Uk, **292**, 756  
 Nibbering, P. H., **290**, 844  
 Nibuya, Masashi, **291**, 1265  
 Nichita, Norica, **293**, 918  
 Nicholls, Linda I., **291**, 1081  
 Nicod, Pascal, **295**, 174  
 Nicolas, Jean-Paul, **295**, 841  
 Nicoll, Steven B., **292**, 819  
 Nieda, Mie, **296**, 194  
 Niederhauser, Guy, **295**, 174  
 Niederkofler, Eric E., **297**, 401  
 Nieto, J., **299**, 312  
 Nieuwerburgh, Lies Van, **291**, 344  
 Nigam, Sanjay K., **297**, 1159  
 Niisato, Naomi, **298**, 619  
 Nikaido, Itoshi, **290**, 1499  
 Nikitin, Alexey G., **295**, 312  
 Nikolajczyk, Barbara S., **292**, 427  
 Nikolic, Ivana, **298**, 364  
 Nilssen, Laila S., **291**, 588  
 Nilsson, Gunnar, **297**, 480  
 Nilsson, Olle, **293**, 451  
 Nilsson-Ehle, Peter, **292**, 944  
 Nimura, Yuji, **294**, 642  
 Nio, Yasunori, **293**, 993  
 Nirasawa, Hiromi, **297**, 32  
 Nirasawa, Satoru, **296**, 78  
 Nishi, Akito, **297**, 1277  
 Nishi, Hirofumi, **291**, 385  
 Nishi, Masumi, **293**, 247  
 Nishi, Miyuki, **292**, 318  
 Nishida, Koyo, **294**, 46  
 Nishida, Motohiro, **291**, 995  
 Nishida, S., **296**, 1322  
 Nishida, Takashi, **299**, 755  
 Nishida, Yasuhiro, **294**, 205  
 Nishida, Yasuto, **290**, 1042  
 Nishida, Yoshiharu, **290**, 713  
 Nishigaki, Ryuichi, **295**, 112  
 Nishiguchi, Shuhei, **291**, 738  
 Nishihara, Hiroshi, **296**, 716  
 Nishihara, Tatsuro, **292**, 642  
 Nishihara, Toshio, **297**, 664  
 Nishii, Hiroko, **296**, 85  
 Nishijo, Koichi, **295**, 354  
 Nishikawa, Hiroyuki, **295**, 370  
 Nishikawa, Kazuya, **297**, 950  
 Nishikawa, Kouki, **295**, 756  
 Nishikawa, So, **290**, 311  
 Nishikawa, Takako, **297**, 1108  
 Nishimatu, Shinichirou, **293**, 247  
 Nishimiya, Yoshiyuki, **295**, 31  
 Nishimori, Katsuhiko, **299**, 328  
 Nishimura, Koji, **298**, 450  
 Nishimura, Nobuhiro, **292**, 133  
 Nishimura, Susumu, **299**, 669  
 Nishimura, Toshihide, **293**, 1348  
 Nishimura, Yasuharu, **290**, 1022; **294**, 734  
 Nishimura, Yuhei, **297**, 1253  
 Nishino, Ichizo, **291**, 1283  
 Nishino, S., **294**, 615  
 Nishino, Takeshi, **299**, 247  
 Nishino, Tokuzo, **293**, 1389; **297**, 1096  
 Nishio, Ichiro, **294**, 359; **297**, 672  
 Nishitani, Shinobu, **299**, 693  
 Nishitani, Tomohito, **292**, 256; **296**, 1164  
 Nishiuchi, R., **296**, 73  
 Nishiyama, Akira, **295**, 663  
 Nishiyama, Yoshiharu, **295**, 458  
 Nishiyama, Yukihiko, **298**, 357  
 Nishizaki, Tomoykui, **294**, 42; **295**, 376  
 Nishizawa, Hitoshi, **292**, 781  
 Nishizuka, Itaru, **296**, 497  
 Nissen-Meyer, Jon, **295**, 826  
 Nistér, Monica, **290**, 349; **296**, 604  
 Nisticò, Robert, **291**, 255  
 Nitanda, Hiroyuki, **296**, 497  
 Nitti, M., **294**, 547  
 Niwa, Hajime, **296**, 8  
 Nlend, Marie-Christine, **298**, 193  
 Noben-Trauth, Konrad, **296**, 1143  
 Nobori, Kiyoshi, **296**, 274  
 Nochi, Hitoshi, **291**, 296  
 Noda, Tetsuo, **298**, 87  
 Noda, Yoichi, **296**, 305  
 Noda, Yukiko, **299**, 641  
 Noguchi, Kousei, **291**, 508  
 Noguchi, Misato, **293**, 945  
 Noh, Jae-Hyung, **291**, 1031  
 Noh, Yun-Hee, **296**, 1125  
 Nohno, Tsutomu, **293**, 247  
 Noike, Motoyoshi, **297**, 1096  
 Noji, Sumihare, **292**, 138; **293**, 247  
 Nojiri, Hideaki, **296**, 233  
 Nolan, Anna L., **293**, 670  
 Noma, Hidetoshi, **295**, 300  
 Nomaguchi, Kouji, **296**, 1215  
 Nomoto, Ken-ichi, **290**, 177  
 Nomoto, Satoshi, **291**, 354  
 Nomura, Masafumi, **296**, 1286  
 Nomura, Masahiko, **290**, 933  
 Nomura, Midori, **290**, 140  
 Nomura, Sachiko, **295**, 236  
 Nomura, Seiji, **290**, 1048  
 Nomura, Soichiro, **291**, 1265  
 Nomura, Taisei, **296**, 651  
 Nomura, Takanori, **293**, 953  
 Nomura, Tamotsu, **295**, 376  
 Nomura, Yasuyuki, **294**, 215  
 Nonaka, Ikuya, **291**, 1283  
 Nonogaki, Katsunori, **295**, 249  
 Norén, Ove, **299**, 35  
 Nord, Magnus, **293**, 907  
 Nordman, Tomas, **291**, 1128  
 Norman, Anthony W., **298**, 414  
 Norona, Wilma S., **293**, 1077  
 Nose, Kiyoshi, **298**, 178; **299**, 360  
 Noshi, Takeshi, **293**, 993  
 Notario, Vicente, **291**, 193  
 Notomi, Tsugunori, **290**, 1195  
 Nouchi, Tatsuhito, **291**, 385  
 Novak-Hofer, Ilse, **295**, 597  
 Noviello, Cristiana, **295**, 324  
 Novotný, Marian, **296**, 664  
 Nowicki, Cristina, **293**, 633  
 Nozaka, Hiroyuki, **298**, 646  
 Nozaki, Masatoshi, **294**, 760  
 Nozaki, Satoshi, **292**, 133  
 Nozaki, Takenori, **297**, 329  
 Nozawa, Koji, **290**, 213  
 Nozawa, Naoki, **298**, 357  
 Nozawa, Ryushi, **291**, 623  
 Nozawa, Yoshinori, **291**, 861; **294**, 363  
 Ntambi, James M., **294**, 785  
 Nuki, Yoshitsugu, **290**, 1096  
 Numata, Atsushi, **297**, 143  
 Numata, Osamu, **292**, 1098  
 Numata, Takuya, **297**, 517  
 Nunes, Patrícia A., **292**, 741  
 Núñez, María Felisa., **290**, 824  
 Nurizzo, Didier, **291**, 1  
 Nurk, Alan, **291**, 146  
 Nürnberger, Heike, **292**, 937  
 Nusco, Gilda A., **290**, 1015  
 Nygren, Jonas, **294**, 872  
 Oates, John A., **297**, 1135  
 Oba, Yuichi, **290**, 1037  
 Obana, Masahiro, **294**, 359  
 Obata, Aya, **292**, 368  
 Obata, Shigehiro, **292**, 434  
 Oberle, Stefanie, **290**, 1539  
 Obita, Takayuki, **299**, 42  
 Oboki, Keisuke, **290**, 1250; **297**, 111  
 Occhi, Gianluca, **298**, 151  
 Ochalski, Rafal, **294**, 655  
 O'Connell, J., **290**, 1308  
 Oda, Masaaki, **290**, 865  
 Oda, Mayumi, **290**, 701  
 Oda, Michael N., **290**, 921  
 Oda, Michio, **290**, 475  
 Oda, Sanae, **294**, 205  
 Odani, Yo, **299**, 148  
 Odawara, Takashi, **290**, 1139  
 Odenthal, M., **296**, 374  
 Odera-Marah, Valerie A., **295**, 800  
 Odoms, Kelli, **291**, 453  
 O'Donnell, John B., Jr., **293**, 892  
 Oe, Yoshihiko, **291**, 1225  
 Oehme, Felix, **296**, 343  
 Oesch, Franz, **292**, 195; **294**, 1052  
 Offenhäuser, Nina, **295**, 295  
 Offord, Elizabeth, **296**, 261  
 Ofir, Rachel, **296**, 93



- Ofman, R., **290**, 629  
 Ogata, Etsuro, **295**, 621  
 Ogata, Itsuro, **290**, 898  
 Ogata, Makiko, **292**, 8  
 Ogata, Masato, **292**, 13  
 Ogawa, Hironori, **294**, 1151  
 Ogawa, Michio, **292**, 498  
 Ogawa, Ryohei, **290**, 498  
 Ogawa, Yoshiyuki, **293**, 344; **299**, 389  
 Ogihara, Takehide, **299**, 291  
 Oguma, Keiji, **292**, 434  
 Ogura, Atsuo, **290**, 403  
 Ogura, Atsushi, **298**, 785  
 Ogura, Keiji, **291**, 868  
 Ogura, Tsutomu, **296**, 976  
 Oh, Bong R., **292**, 482  
 Oh, Chad K., **294**, 1155  
 Oh, Donghoon, **290**, 204  
 Oh, Goo Taeg, **293**, 375  
 Oh, Hyun-Wha, **290**, 613  
 Oh, In Suk, **296**, 401  
 Oh, Myungsok, **296**, 419  
 Oh, Seung Hyun, **296**, 1157; **299**, 806  
 Oh, Tae Hwan, **296**, 247  
 Oh, Yeon-sahng, **292**, 1010  
 Oh, Youngman, **294**, 480  
 Ohama, Tohru, **290**, 713; **296**, 625  
 O'Hanlon, Terrance P., **294**, 609  
 Ohara, Mamiko, **299**, 285  
 Ohara, Osamu, **290**, 1260  
 O'Harte, Finbarr P. M., **290**, 1420  
 Ohashi, Suzuyo, **293**, 1530  
 Ohba, Motoi, **294**, 1109  
 Ohba, Shun-ichi, **298**, 178  
 Ohbayashi, Tetsuya, **290**, 984  
 Ohbo, Kazuyuki, **292**, 667  
 Ohe, Toru, **296**, 523  
 Ohgane, Jun, **290**, 701  
 Ohgi, Tadaaki, **296**, 544  
 Ohgiya, Satoru, **293**, 969  
 Oh-hora, Masatsugu, **292**, 13  
 Ohigashi, Hajime, **294**, 5; **295**, 306  
 Ohike, Nobuyuki, **297**, 125  
 Ohishi, Nobuko, **291**, 861; **294**, 363  
 Ohizumi, Yasushi, **298**, 793  
 Ohki, Gaku, **291**, 278  
 Ohki, Misao, **290**, 403  
 Ohkubo, Hiroaki, **291**, 884  
 Ohkubo, Tadayasu, **291**, 1297  
 Ohmiya, Yoshihiro, **291**, 884  
 Ohmori, Iori, **295**, 17  
 Ohmori, Sachiko, **297**, 288  
 Ohmori, Shigeru, **297**, 59  
 Ohmori, Tsukasa, **299**, 483  
 Ohmori, Yasushige, **292**, 88  
 Ohmori, Yoshihiro, **297**, 433  
 Ohnishi, Gen-ichi, **298**, 240  
 Ohnishi, Masatake, **290**, 1220  
 Ohnishi, Noriaki, **292**, 190  
 Ohnishi, Shiho, **290**, 778  
 Ohnishi, Yoshinari, **295**, 917  
 Ohno, Hideki, **295**, 236; **296**, 54  
 Ohno, Shigeaki, **297**, 419  
 Ohno, Shigeo, **290**, 510; **297**, 1324  
 Ohno, Yasuo, **296**, 172  
 Ohoka, Yoshiharu, **297**, 32  
 Ohshima, Yasumi, **293**, 698  
 Ohshiro, Naomi, **290**, 482  
 Ohta, Akinori, **294**, 1071; **298**, 103  
 Ohta, Kohei, **295**, 376  
 Ohta, Shigeru, **293**, 554  
 Ohta, Tomohiko, **295**, 370  
 Ohta, Tsutomu, **299**, 328  
 Ohta, Yoshihiro, **290**, 23  
 Ohtaki, Tetsuya, **293**, 396  
 Ohtani, Hisakazu, **296**, 644  
 Ohtsuka, Yoko, **295**, 17  
 Ohtsuru, Akira, **290**, 1354  
 Ohuchi, Hideyo, **293**, 247  
 Ohya, Kenji, **292**, 362  
 Ohyama, Tohru, **292**, 434  
 Ohzono, Yoshiyuki, **296**, 1251  
 Oikawa, Haruna, **297**, 341  
 Oikawa, Kensuke, **291**, 296  
 Oikawa, Kosuke, **290**, 984  
 Oikawa, Shinzo, **292**, 642  
 Oikawa, Tadao, **298**, 632  
 Oike, Yuichi, **293**, 1124; **298**, 731  
 Oishi, Isao, **290**, 225  
 Oishi, Katsutaka, **298**, 198  
 Ojeda Ojeda, Miriam, **292**, 538  
 Oka, Eiji, **295**, 17  
 Oka, Masahiro, **294**, 1109  
 Oka, Yoshitomo, **299**, 291  
 Okabe, Shinichiro, **291**, 567  
 Okada, Hirokazu, **297**, 255  
 Okada, Hiromasa, **298**, 714  
 Okada, Mayumi, **290**, 1048; **298**, 24  
 Okada, Megumi, **293**, 653  
 Okada, Miki, **292**, 1023  
 Okada, Nami, **296**, 1097  
 Okada, Seiji, **292**, 121  
 Okada, Taro, **294**, 1109  
 Okada, Tomoko, **290**, 121  
 Okamoto, Hiroaki, **290**, 242  
 Okamoto, Koichi, **292**, 571; **297**, 1171  
 Okamoto, Masahiko, **297**, 433  
 Okamoto, Miyuki, **296**, 85  
 Okamoto, Takahiro, **298**, 587  
 Okamoto, Takashi, **291**, 890; **294**, 1121; **298**, 46  
 Okamoto, Takeshi, **295**, 354  
 Okamoto, Tamami, **290**, 973; **296**, 877; **297**, 419; **299**, 183  
 Okamoto, Tsuyosi, **293**, 1341  
 Okamura, Atsuo, **298**, 87  
 Okamura, Yosuke, **296**, 765  
 Okano, Hideyuki, **293**, 150  
 Okano, Hiroshi, **297**, 59  
 Okayama, Rie, **299**, 455  
 Okazaki, Yasushi, **290**, 1499; **296**, 497  
 Okazawa, Hitoshi, **293**, 307; **294**, 268  
 O'Keefe, Regis J., **297**, 237  
 Okeley, Nicole M., **295**, 952  
 Oki, Shigeo, **296**, 497  
 Okino, Nozomu, **299**, 160  
 Okiura, Tatsuyuki, **298**, 450  
 Okochi, Masayasu, **296**, 313  
 Okochi, Mina, **291**, 769  
 Okret, Sam, **296**, 702  
 Okubo, Kataaki, **293**, 327  
 Okubo, Yasunori, **292**, 144; **299**, 208  
 Okuda, Ayumu, **291**, 1297  
 Okuda, Tomohiko, **296**, 537  
 Okuda, Yukichi, **297**, 1291  
 Okuma, Yasunobu, **294**, 215  
 Okumura, Hiroshi, **291**, 806  
 Okumura, Ko, **296**, 328; **299**, 488  
 Okumura, Masayo, **296**, 313  
 Okumura, Sayaka, **296**, 1372  
 Okumura, Tadayoshi, **290**, 475  
 Okuno, Hiroaki, **290**, 121  
 Okura, Takafumi, **290**, 1255  
 Okuyama, Hajime, **297**, 779  
 Olamendi-Portugal, Timoteo, **299**, 562  
 Olczak, Mariusz, **293**, 213  
 Oliva, Maria Luiza V., **291**, 635  
 Oliva, Maria Luiza Vilela, **294**, 879  
 Oliveira, Manuel, **296**, 261  
 Olivera, Christopher J., **298**, 414  
 Olivi, Luisa, **295**, 978  
 Olivieri, Fabiola, **299**, 539  
 Olofsson, Anders, **294**, 309  
 Olsen, E., **296**, 671  
 Olsen, Hanne, **296**, 139  
 Olson, Ann Louise, **292**, 409  
 Olson, Joan C., **291**, 91  
 Olson, L. Karl, **293**, 1168  
 Olson, Richard D., **291**, 433  
 Olson, Richard E., **299**, 569, 744  
 Olsson, A. Yvonne, **299**, 305  
 Olsson, Jerker M., **291**, 1128  
 Olsson, Niclas, **297**, 480  
 Oma, Yoko, **293**, 1228  
 Oma, Yukako, **299**, 328  
 Omata, Masao, **291**, 868  
 Omori, Akira, **295**, 112  
 Omori, Toshio, **296**, 233  
 Omori, Yoshihiro, **293**, 470  
 Omotegara, Fumie, **292**, 957  
 Omura, Satoshi, **291**, 1065  
 Onda, Haruo, **293**, 396  
 O'Neill, Michael C., **291**, 979  
 O'Neill, Allison F., **294**, 719  
 Ong, Choon-Nam, **291**, 321  
 Ong, John M., **295**, 668  
 Onimaru, Yasuyuki, **296**, 1251  
 Onishi, Yukiko, **299**, 291  
 Ono, Hiraku, **299**, 291  
 Ono, Kazuo, **296**, 530  
 Ono, Teruo, **292**, 1283; **295**, 74  
 Onoe, Shinji, **290**, 994  
 Onorato, Thomas M., **296**, 1091  
 Onyia, Jude E., **290**, 42  
 Ookawa, Keizou, **292**, 274  
 Ookawara, Tomomi, **296**, 54  
 Oonuki, Akiko, **293**, 945  
 Oostera, Ben A., **292**, 58  
 Ootani, Akifumi, **294**, 906  
 Opolon, Paule, **296**, 1000  
 Ophhof, Tobias, **292**, 71  
 Oreffo, Richard O. C., **292**, 1, 144; **298**, 324; **299**, 208  
 Origuchi, Tomoki, **296**, 26  
 Orii, Fumika, **296**, 1286  
 Orner, Gayle A., **296**, 584  
 Orosz, G., **290**, 153  
 Orrenius, Sten, **292**, 904  
 Orta, Teresa, **291**, 574  
 Osada, Hiroyuki, **291**, 838  
 Osada, Makoto, **299**, 483  
 Osakabe, Yuriko, **293**, 806  
 Osawa, Hiroyuki, **294**, 470  
 Osborne, Timothy F., **290**, 1295  
 Oshida, Tadahilo, **293**, 1254; **297**, 1282  
 Oshida, Yoshiharu, **290**, 1199  
 Oshikawa, Katsuhisa, **299**, 18  
 Oshima, Masamichi, **290**, 1139  
 Oshimura, Mitsuo, **290**, 1499; **295**, 112; **299**, 599  
 Oshiro, Naomasa, **294**, 760  
 Oshiro, Satoru, **290**, 213  
 Östenson, Claes-Göran, **291**, 945; **291**, 1038  
 Ostler, Elizabeth L., **299**, 273  
 Østvold, Anne-Carine, **291**, 1146  
 Osuga, Yutaka, **292**, 456  
 Ota, Sakae, **297**, 1167  
 Ota, Satoshi, **296**, 214  
 Ota, Yutaka, **290**, 169  
 Otaegui, Pedro J., **297**, 841  
 Othman, Iekhsan, **295**, 1007  
 O'Toole, Edel A., **298**, 651  
 Otsuka, Hiroko, **291**, 354  
 Otsuka, Izumi, **293**, 293  
 Otsuki, Tetsuya, **291**, 628  
 Ott, Peter, **290**, 518  
 Otten, Kevin, **294**, 626  
 Otten, Uwe, **295**, 532  
 Ottenhoff, Roelof, **295**, 1156  
 Ottmann, Oliver Gerhard, **292**, 937  
 Oualikene, Wahiba, **292**, 626  
 Ouchi, Yasuyoshi, **299**, 222  
 Ouchida, Mamoru, **295**, 17  
 Oudart, Nicole, **290**, 125  
 Oum, Ji-Hyun, **298**, 486  
 Ourlin, Jean-Claude, **291**, 378  
 Ouyang, Pin, **294**, 448  
 Overstreet, L. Kevin, **295**, 540  
 Ovod, Vladimir, **299**, 703  
 O-Wang, Jiyang, **292**, 121; **293**, 1132  
 Owen, Caroline P., **294**, 180, 380  
 Owen, Elisabeth A., **290**, 1602  
 Oxford, Misti G., **290**, 1513  
 Oyake, Daisuke, **295**, 370  
 Oyanagi, Kiyomitsu, **293**, 307  
 Ozaki, Takashi, **290**, 1483  
 Ozaki, Toshinori, **295**, 501  
 Ozaki, Yukio, **299**, 483  
 Ozasa, Ami, **291**, 987  
 Ozawa, Akira, **297**, 1171  
 Ozawa, Hiroyasu, **297**, 341  
 Ozawa, Kazuo, **290**, 169  
 Ozawa, Keiya, **291**, 628  
 Ozawa, Shogo, **296**, 172



- Ozcan, Sabire, **295**, 724  
 Ozturk, Mehmet, **299**, 839  
 Ozu, M., **294**, 615
- Pabbathi, V.K., **297**, 302  
 Pabón-Peña, Lil M., **297**, 1112  
 Pacini, Stefania, **290**, 820  
 Padilla, C. Alicia, **295**, 1046  
 Padival, Simi, **297**, 863  
 Padmanaban, G., **292**, 312  
 Paganelli, Roberto, **290**, 1393  
 Pagès, Jean-Marie, **293**, 1370  
 Pagnotta, E., **290**, 1010; **293**, 1502  
 Paik, Phil Y., **293**, 932  
 Pain, Roger H., **297**, 962  
 Pal, Prakriti, **290**, 1336  
 Palade, Philip, **296**, 429  
 Palczewski, Krzysztof, **290**, 615  
 Palková, Zdena, **294**, 962  
 Palla, Franco, **295**, 519  
 Palleschi, Claudio, **298**, 559  
 Pallotti, Francesco, **293**, 521  
 Palma, Mário Sérgio, **295**, 142  
 Palmer, D. Gail, **291**, 439  
 Palmethofer, Alois, **293**, 1438  
 Palmieri, Ferdinando, **299**, 418  
 Palomo, Maria Jesús, **297**, 841  
 Pals, Steven T., **298**, 80  
 Palumbo, Anna, **293**, 1536  
 Palvimo, Jorma J., **291**, 897  
 Pambalk, Konstanze, **293**, 239  
 Pan, Pamela L., **294**, 680  
 Pan, Ying-Xian, **297**, 659  
 Pan, Zhong-Zong, **290**, 955  
 Panagopoulos, Dimitris J., **298**, 95  
 Pandhal, Sanjay C., **293**, 427  
 Pandak, William M., **293**, 338  
 Pandey, Gunjan, **299**, 404  
 Panetta, Danilo, **295**, 1085  
 Pang, Saic, **298**, 289  
 Panglao, Maria Gracia, **299**, 581  
 Panmanee, Warunya, **299**, 177  
 Pannala, Ananth Sekher, **292**, 175  
 Panski, Andreas, **292**, 841  
 Pantano, Thais, **290**, 53  
 Paoletti, Anna Maria, **291**, 255  
 Paoletti, Sergio, **297**, 382  
 Paolucci, Ugo, **290**, 1589  
 Papapostolou, David, **295**, 1090  
 Papini, Anna Maria, **293**, 1053  
 Paradiso, Angelo, **292**, 161  
 Pardha Saradhi, P., **298**, 247  
 Parini, Paolo, **293**, 1333  
 Parisi, Tiziana, **291**, 1138  
 Pariza, Michael W., **294**, 785  
 Park, Byung-Hyun, **290**, 1090  
 Park, Chan, **295**, 771  
 Park, Cheon-Seok, **295**, 818  
 Park, Chul-Seung, **298**, 478  
 Park, Daeho, **296**, 419  
 Park, Edwards A., **290**, 256  
 Park, Eun Ju, **290**, 558  
 Park, Eun-Mi, **296**, 337  
 Park, Heonyong, **291**, 158  
 Park, Hyi-Man, **292**, 88  
 Park, Hyunjeong, **298**, 289  
 Park, Hyun-Sook, **294**, 940  
 Park, Jae B., **292**, 1104  
 Park, Jae-Bong, **298**, 815  
 Park, Jae-Won, **292**, 383  
 Park, Jae-Yong, **290**, 1176  
 Park, Jae Young, **294**, 940  
 Park, Jeon-Woo, **292**, 542  
 Park, Jeong Won, **290**, 1183; **291**, 431  
 Park, Jin-Woo, **290**, 1090  
 Park, Ji-Sun, **296**, 337  
 Park, Jong Gu, **296**, 1005  
 Park, Jong Hoon, **298**, 289  
 Park, Jong-Wook, **298**, 230  
 Park, J.-S., **299**, 806  
 Park, Junbae, **290**, 236  
 Park, Jungchan, **298**, 486  
 Park, Jung-Min, **291**, 23  
 Park, Jung S., **298**, 251  
 Park, J.Y., **299**, 806  
 Park, Kee-Jai, **298**, 269  
 Park, Kwan-Hwa, **295**, 818  
 Park, Kyoungsoo, **290**, 204  
 Park, Mae Ja, **292**, 1081; **298**, 815  
 Park, Minwoo, **297**, 294  
 Park, M.K., **296**, 293  
 Park, Raekil, **291**, 663  
 Park, Rang-Woon, **294**, 940; **297**, 1218  
 Park, Sae-Young, **292**, 715; **295**, 119  
 Park, Sang Chul, **293**, 1453; **294**, 818  
 Park, Sang Dai, **290**, 35; **294**, 1184; **295**, 970  
 Park, Sang Gyu, **291**, 158  
 Park, Sang Ryeol, **291**, 425  
 Park, Sang-Youel, **291**, 150, 233; **295**, 515  
 Park, Seong-Cheol, **295**, 591  
 Park, Seung-Yoon, **297**, 1218  
 Park, Soo Kwon, **296**, 1152  
 Park, Sung Gyoo, **291**, 1031  
 Park, Sung-Jun, **291**, 1031  
 Park, Sungmoo, **293**, 163  
 Park, Sungsik, **298**, 687  
 Park, Sun-Hwa, **298**, 613  
 Park, Tae Kyu, **290**, 35  
 Park, Tai Hyun, **295**, 779  
 Park, Wan, **295**, 283  
 Park, Won Kyun, **290**, 1506  
 Park, Woong-Yang, **293**, 617  
 Park, Won Sang, **299**, 652  
 Park, Yeonhwa, **294**, 785  
 Park, Yong Bok, **293**, 375  
 Park, Yoonkyung, **291**, 1006; **293**, 231; **295**, 591; **297**, 885  
 Park, Young-Mee, **296**, 337  
 Park, Young-Un, **293**, 733  
 Park, Yun Kyung, **295**, 929  
 Parker, Janice C., **290**, 839  
 Parmeggiani, Andrea, **296**, 749  
 Parmentier, Marc, **292**, 231  
 Part, Woo Jin, 419  
 Partridge, Kris, **292**, 144; **299**, 208  
 Parys, Jan B., **294**, 249  
 Paschke, Ralf, **290**, 1084  
 Pascolo, Lorella, **293**, 100  
 Passamonti, Sabina, **296**, 631  
 Pastan, Ira, **294**, 813  
 Pasternak, Gavril W., **297**, 659  
 Pastor-Anglada, Marçal, **296**, 575  
 Patel, Amanda Jane, **292**, 339  
 Patel, Lisa, **290**, 707  
 Patel, Sangita P., **295**, 223  
 Patel, Sushma, **294**, 88  
 Pati, Nirupma, **292**, 243  
 Pati, Uttam, **292**, 243  
 Patra, Aditi, **292**, 482; **294**, 464  
 Pattanayak, Gopal K., **291**, 921  
 Patterson, Shelley, **298**, 371  
 Patthy, András, **296**, 156  
 Patthy, László, **296**, 156  
 Paul, Dieter, **294**, 864  
 Paul, Roland U., **293**, 766  
 Paula-Lopes, F.F., **295**, 37  
 Paulhe, Frédérique, **297**, 261  
 Paulmichl, Markus, **290**, 1564  
 Paul Raj, C., **297**, 202  
 Paulsen, Ragnhild E., **291**, 1146  
 Pavlov, Pavel F., **293**, 321  
 Pawlikowski, Marek, **297**, 931  
 Payne, Tracie L., **293**, 1556  
 Payrastra, Bernard, **291**, 305; **296**, 106  
 Pazirandeh, Ahmad, **296**, 702  
 Pearce, Linda L., **297**, 220  
 Pearl, Laurence, **290**, 967  
 Pearlman, Ronald E., **292**, 1231  
 Peaucellier, Gérard, **291**, 406  
 Pecquery, René, **293**, 622  
 Pedersen, Anette Amstrup, **295**, 243  
 Pedersen, Jesper Søndergaard, **298**, 566  
 Pedersén, Marianne, **291**, 344  
 Pederson, Raymond A., **291**, 1302; **296**, 229  
 Pedrajas, José R., **295**, 1046  
 Peers, Chris, **291**, 332  
 Peetermans, W.E., **291**, 528  
 Peeters, Theo L., **293**, 1223  
 Pei, M., **294**, 149  
 Peiper, Stephen C., **292**, 449  
 Peiser, Christian, **291**, 1160  
 Pekala, Phillip H., **294**, 329  
 Pellerin, Charles, **295**, 682  
 Pelletier, Jean-Pierre, **291**, 1151  
 Pelosi, Paolo, **293**, 50  
 Pelus, Louis M., **292**, 593  
 Penafiel, Rafael, **293**, 106  
 Peng, Sheng-Bin, **292**, 601  
 Peng, Ying, **290**, 737; **297**, 185  
 Penke, Botond, **292**, 931  
 Penning, Louis C., **293**, 1279  
 Penno, Hendrik, **293**, 451  
 Penolazzi, Letizia, **292**, 761  
 Pentimalli, Francesca, **290**, 942  
 Penyige, András, **290**, 1169  
 Pepe, Salvatore, **293**, 1377  
 Peralta, Jorge, **299**, 135  
 Peralta, S., **296**, 425  
 Perchenet, L., **297**, 302  
 Perego, Carla, **294**, 127; **296**, 515  
 Pereira, José Henrique, **295**, 142  
 Pereira, Monica, **291**, 655  
 Pérez-Castñeira, José R., **294**, 567  
 Pérez-Fernández, Román, **292**, 250  
 Pérez-Montfort, Ruy, **295**, 958  
 Perks, C.M., **294**, 988, 995  
 Permana, Paska A., **293**, 1161  
 Perret, Bertrand, **295**, 362; **297**, 261  
 Perret, Eric, **291**, 406  
 Persaud, Shanta J., **296**, 589  
 Persson, Terese, **291**, 844  
 Pervaiz, Shazib, **290**, 1145  
 Pesce, C. Gustavo, **295**, 1077  
 Pesheva, Penka, **294**, 742  
 Pestina, Tamara I., **292**, 916  
 Petersen, Helle Vestergaard, **295**, 243  
 Petersen, James N., **294**, 76  
 Petersen, Torben E., **292**, 550  
 Peterson, Charlotte A., **296**, 1340  
 Peterson, Curt, **293**, 1489  
 Peterson, Jim, **297**, 220  
 Peterson-Wakeman, Robert, **297**, 729  
 Petit, Agnès, **290**, 1408  
 Petrescu, Stefana M., **293**, 918  
 Petrucca, Andrea, **294**, 1064  
 Pettersen, I., **296**, 671  
 Peyton, Kelly J., **291**, 1014  
 Pezzetti, Furio, **292**, 761  
 Pfeilschifter, Josef, **298**, 408  
 Pham, Xuan Hoi, **294**, 334  
 Phillips, David H., **293**, 1497  
 Phoenix, D. A., **290**, 427  
 Phylip, Lowri H., **295**, 1020  
 Pi, Hualiang, **295**, 862; **296**, 206  
 Picard, André, **291**, 406  
 Piccin, Daniela, **297**, 828  
 Picerno, Gina N., **293**, 23  
 Pickard, Michael A., **295**, 828  
 Picking, Wendy L., **292**, 463  
 Picking, William D., **292**, 463  
 Pidoux, Elisabeth, **294**, 340  
 Pidsudko, Z., **298**, 333  
 Piehler, Armin, **295**, 408  
 Pierantoni, Giovanna Maria, **290**, 942  
 Pierotti, Marco A., **296**, 515  
 Pikkariainen, Timo, **290**, 1462  
 Pilbeam, Carol, **297**, 46  
 Pilecki, Marek, **296**, 1310  
 Pilegaard, Henriette, **298**, 309  
 Pin, Christopher L., **299**, 7  
 Pineau, Thierry, **295**, 1052  
 Pinna, Lorenzo A., **290**, 790; **296**, 1366  
 Pinto, Ernani, **291**, 344  
 Pirie-Shepherd, S. R., **292**, 886  
 Pirttilä, Tuula, **298**, 693  
 Pirulli, Doroti, **299**, 424  
 Pitcher, Wayne H., III, **296**, 1352  
 Pitula, Joseph, **290**, 569  
 Piva, Roberta, **292**, 761  
 Pizzimenti, Stefania, **295**, 267  
 Plaisance, Valérie, **295**, 174  
 Plásek, Jaromír, **297**, 154

- Platanias, Leonidas C., **291**, 744  
 Platt, Frances M., **290**, 1361  
 Plopper, G.E., **293**, 1000; **294**, 1017  
 Plotz, Paul H., **291**, 582  
 Plouët, Jean, **294**, 764  
 Poderoso, Juan José, **299**, 135  
 Podestà, Ernesto J., **299**, 135  
 Poellinger, Lorenz, **293**, 446  
 Pohl, Lance R., **294**, 225  
 Polak, Julia M., **292**, 617  
 Polanowska-Grabowska, Renata, **297**, 129  
 Poletti, Laura, **292**, 222  
 Poli, G., **294**, 547  
 Politis, Manolis, **298**, 574  
 Polizio, F., **297**, 587  
 Pollice, Alessandra, **291**, 1138  
 Ponnampalam, Stephen N., **297**, 863  
 Pons, Giovanni, **291**, 476  
 Pontet, Michel, **296**, 507  
 Ponzio, G., **293**, 112  
 Popov, Serguei G., **293**, 349  
 Popov, V.O., **291**, 959  
 Popović, Tatjana, **297**, 962  
 Porras, Pablo, **295**, 1046  
 Porres, Jesus M., **297**, 1016  
 Porro, Danilo, **294**, 127  
 Porter, Rebecca M., **297**, 818  
 Portier-VandeLuytgaarden, Margriet J.M., **297**, 847  
 Portnoy, Matthew E., **295**, 978  
 Pöschl, E., **290**, 743  
 Possani, Lourival D., **299**, 562  
 Postovit, Lynne-Marie, **297**, 294  
 Potempa, Jan, **294**, 423  
 Potter, James J., **297**, 906  
 Pottier, Mireille, **296**, 1000  
 Potworowski, Edouard F., **296**, 864; **297**, 765  
 Poubelle, Patrice E., **296**, 759  
 Poulton, Nadine P., **291**, 1232  
 Powell, Richard, **293**, 578  
 Prada, Anne E., **299**, 574  
 Prasad, Chandan, **293**, 847  
 Prasad, D. Theertha, **290**, 457  
 Prasad, Puttur D., **291**, 291  
 Prasad, Krishna, **293**, 691  
 Prescott, Mark, **298**, 707  
 Prescott, Stephen M., **292**, 274  
 Presland, Richard B., **296**, 911  
 Preston, Chad, **290**, 249  
 Preuett, Barry L., **293**, 691  
 Preusser, Andrea, **292**, 734  
 Prévost, Marie-Claude, **295**, 362  
 Pries, Axel R., **297**, 1270  
 Primeau, Mélanie, **293**, 1478  
 Prince, Audra M., **290**, 1066  
 Prince, Sonia, **290**, 53  
 Pristovšek, Primož, **292**, 880  
 Pritts, Timothy A., **290**, 469  
 Probst, Mario C.O., **293**, 759  
 Pronzato, M.A., **294**, 547  
 Proud, David, **294**, 1030  
 Proutski, I., **297**, 317  
 Provost, Patrick, **290**, 783  
 Pruett, Ashlie, **294**, 329  
 Prusakiewicz, Jeffery J., **296**, 612  
 Pu, Yongmei, **299**, 762  
 Pujol, Gemma, **294**, 354; **298**, 772  
 Pujol-Borrell, Ricardo, **293**, 1066  
 Pulakat, Lakshmi, **299**, 233  
 Pulst, Stefan-M., **290**, 366  
 Purps, O., **295**, 330  
 Půta, František, **296**, 664  
 Puzas, Edward J., **297**, 237  
 Puzon, Geoffrey J., **294**, 76  
 Qadota, Hiroshi, **292**, 697  
 Qasba, Pradman K., **291**, 1113  
 Qi, Chen, **294**, 329  
 Qi, Sheng Mei, **292**, 287  
 Qi, Yipeng, **299**, 897  
 Qian, Lingjia, **290**, 1411  
 Qin, Wenxin, **297**, 528  
 Qin, Xu-rong, **297**, 1011  
 Qu, Yujie, **295**, 223  
 Quaid, Gina, **291**, 453  
 Quan, Shuo, **291**, 68  
 Quaranta, Michele, **292**, 161  
 Quarles, L. Darryl, **297**, 38  
 Quehenberger, Oswald, **290**, 73  
 Quevedo, Celia, **291**, 560  
 Quezada-Calvillo, Roberto, **295**, 394  
 Quintanilla, Miguel, **296**, 267  
 Quintero-Mora, María Leonor, **295**, 289  
 Raben, Nina, **291**, 582  
 Racaud-Sultan, Claire, **297**, 261  
 Rådmark, Olof, **290**, 783; **295**, 985  
 Radovic, Anna, **293**, 1262  
 Radsak, Klaus, **291**, 966  
 Radu, Aurelian, **294**, 354; **298**, 772  
 Rael, Leonard T., **290**, 1388  
 Raetz, Christian R. H., **292**, 1167  
 Raeymaekers, Luc, **294**, 249  
 Raffaelli, Nadia, **297**, 835  
 Raghow, Rajendra, **290**, 256  
 Ragni, Luca, **290**, 1589  
 Ragunath, Chandran, **292**, 468  
 Rahkolin, Mika, **293**, 850  
 Rahman, Amit, **296**, 771  
 Rahman, Irfan, **296**, 1148  
 Rainger, G.E., **295**, 1150  
 Raisin-Tani, Sophie, **296**, 288  
 Raisz, Lawrence, **297**, 46  
 Raj, V. Samuel, **299**, 252  
 Rajah, Talitha T., **293**, 710  
 Rajasekaran, E., **296**, 1058  
 Rak, Alexey, **299**, 710  
 Rakwal, Randeep, **294**, 1009; **295**, 1041  
 Ramírez de Molina, Ana, **296**, 580  
 Ramakrishnan, Boopathy, **291**, 1113  
 Ramakrishnan, Shyam, **296**, 343  
 Ramakumar, S., **299**, 229  
 Raman, Rahul, **290**, 1214  
 Ramanathan, Sunita, **290**, 928; **295**, 730  
 Ramasubbu, Narayanan, **292**, 468  
 Ramos, Celso R.R., **298**, 638  
 Ramos, Fresnida J., **294**, 136  
 Ramos-Clamont, M.G., **295**, 98  
 Rampacek, G.B., **293**, 1138; **298**, 333  
 Rampazzo, Alessandra, **298**, 151  
 Rampazzo, Chiara, **293**, 258  
 Ramponi, G., **296**, 692  
 Rando, Robert R., **292**, 1243  
 Rane, Anders, **299**, 25  
 Raner, Gregory M., **293**, 1  
 Rangarajan, P.N., **292**, 312  
 Ranst, M. Van, **291**, 528  
 Rao, Basuthkar J., **290**, 928; **295**, 730; **296**, 983  
 Rao, P. Vasantha, **294**, 981  
 Rao, R.K., **293**, 610  
 Rao, Y.S., **290**, 318  
 Rapoport, Basil, **295**, 1118  
 Rappa, Germana, **291**, 617  
 Rascher, Wolfgang, **291**, 1160  
 Rasmussen, Jan T., **292**, 550  
 Rauch, Uwe, **294**, 742  
 Rauvala, Heikki, **298**, 324  
 Ravandi, Amir, **290**, 391  
 Raychowdhury, Raktima, **293**, 366; **297**, 1089  
 Raymond, Marc-André, **291**, 261  
 Raymond, Robert C., **294**, 918  
 Raynal, Patrick, **290**, 851  
 Raz, Avraham, **293**, 192  
 Raza, K., **297**, 876  
 Rebas, Elzbieta, **294**, 95; **297**, 931  
 Reboud-Ravaux, Michèle, **295**, 1090  
 Rechkunova, Nadejda I., **297**, 714  
 Rédini, F., **293**, 38  
 Redouls, Daniel, **295**, 362  
 Reed, John C., **293**, 1254; **299**, 652  
 Rees, Sarah G., **292**, 727  
 Reeve, Joseph R., Jr., **293**, 1014  
 Reeves, Raymond, **292**, 427  
 Regaya, Imed, **291**, 640  
 Regitz-Zagrosek, Vera, **298**, 116  
 Reichard, Peter, **293**, 258  
 Reifenberg, K., **294**, 1052  
 Reilly, Timothy P., **294**, 225  
 Rein, Alan, **296**, 1228  
 Reinert, Laura K., **297**, 361  
 Reiss, Claude, **293**, 537  
 Reitman, Marc L., **291**, 522  
 Remaley, Alan T., **295**, 276; **297**, 974  
 Remmers, Elaine F., **294**, 1114  
 Ren, Xiao-Qin, **291**, 806  
 Renaud, Flore, **298**, 282  
 Renn, Walter, **290**, 85  
 Renne, U., **298**, 798  
 Renner, Matthias, **293**, 239  
 Rensing, Christopher, **295**, 616  
 Renzing, N., **294**, 1052  
 Requena, Jesus, **290**, 62  
 Resmini, Marina, **299**, 273  
 Resnick, D., **292**, 886  
 Rettig, R., **290**, 443  
 Reutter, Werner, **292**, 749  
 Rezaie, Sassan, **299**, 688  
 Rezk, Bashir M., **295**, 9  
 Reznik, Jacob, **295**, 668  
 Rha, Hyoungh Kyun, **296**, 1295  
 Rha, Suk Joo, **296**, 1295  
 Rhee, Kunsoo, **290**, 730  
 Rhee, Won Jong, **295**, 779  
 Rhim, Hyewhon, **296**, 247  
 Rho, Hye-Won, **290**, 1090  
 Rho, Jae Kyun, **297**, 91  
 Rhodes, Hope E., **295**, 276  
 Rian, Edith, **297**, 912  
 Ribbons, Douglas W., **297**, 232  
 Ribière, Catherine, **291**, 394  
 Riccardi, Daniela, **297**, 71  
 Ricci, Vittorio, **292**, 167  
 Rice, Henry E., **290**, 763; **294**, 371  
 Rice-Evans, Catherine A., **292**, 175  
 Richard, Franoise, **290**, 1161  
 Richard, Gabriele, **296**, 721  
 Richardson, Arlan, **294**, 136  
 Richardson, James A., **299**, 1  
 Richarme, Gilbert, **296**, 749  
 Richter, Wiltrud, **293**, 284; **299**, 109  
 Řičicová, Markéta, **294**, 962  
 Ricort, Jean-Marc, **293**, 55  
 Rieber, Manuel, **297**, 943  
 Rieger, Leonie, **296**, 870  
 Riego, Lina, **293**, 79  
 Riemann, Dagmar, **295**, 423  
 Rigau, Teresa, **297**, 841  
 Rigoulet, Michel, **293**, 1383  
 Rikiyama, Toshiki, **296**, 792  
 Riley, Donald E., **298**, 581  
 Rincheval, Vincent, **298**, 282  
 Ringel, M., **294**, 1052  
 Ringel, Matthew D., **296**, 67  
 Riordan, James F., **294**, 287  
 Rittenhouse, Susan E., **296**, 178  
 Rivabene, Roberto, **290**, 1393  
 Rival, Sylvie, **290**, 53  
 Rivas, Luis, **291**, 574  
 Rizzetti, Maria Grazia, **296**, 515  
 Rizzo, Vincenzo F., **298**, 383  
 Rizzo, Patrizia, **292**, 58  
 Roach, Helmutrud I., **298**, 324  
 Robaye, Bernard, **296**, 106  
 Robb, Bruce W., **290**, 469; **296**, 41  
 Robbins, Stephen M., **291**, 1232  
 Robert, Benoit, **291**, 655  
 Robert, Claudia, **298**, 371  
 Robert, Justin, **291**, 813  
 Robert-Nicoud, Michel, **290**, 97  
 Roberts, Anita B., **293**, 1556  
 Roberts, Arthur G., **294**, 76  
 Roberts, Mark H., **292**, 776  
 Roberts, Paula, **296**, 1228  
 Robertson, Alan G. S., **291**, 501  
 Robinson, P.A., **295**, 695  
 Robledo, Olivier, **296**, 864; **297**, 765  
 Rochat, Hervé, **291**, 640  
 Roche, Katherine W., **291**, 85



- Rock, Charles O., **292**, 1155  
 Roder, Karim, **293**, 793; **294**, 63  
 Roderigo-Milne, Helen, **296**, 589  
 Rodrigues, Maria Rita, **292**, 869  
 Rodrigues-Lima, Fernando, **291**, 116; **293**, 783  
 Rodríguez, Ekaterina, **293**, 79  
 Rodríguez, Dunia, **292**, 869  
 Rodríguez, Marianne, **295**, 841  
 Rodríguez-Gil, Joan E., **297**, 841  
 Rodríguez-González, Agustín, **296**, 580  
 Rodríguez-Manzanique, Juan Carlos, **293**, 501  
 Rodríguez-Nieto, Salvador, **293**, 497  
 Rodríguez Quesada, Ana, **293**, 497  
 Rodríguez-Romero, Adela, **295**, 958  
 Rodríguez-Zuñiga, Francisco, **295**, 394  
 Roe, Jung-Hye, **297**, 854  
 Roebuck, Jean-Philippe, **294**, 16  
 Roger, Benoit, **290**, 1151  
 Rogers, Michael J., **290**, 869  
 Rogi, Tomohiro, **290**, 1048  
 Rogina, Blanka, **290**, 955  
 Roh, Dong-Hyun, **292**, 1081; **298**, 815  
 Roh, Sujin, **296**, 434  
 Rohde, Holly, **291**, 111  
 Rohra, Dileep Kumar, **298**, 793  
 Rokos, Hartmut, **292**, 805  
 Rokutan, Kazuhito, **290**, 984; **296**, 1322  
 Rolando, Christian, **293**, 1114  
 Rolka, Krzysztof, **292**, 855  
 Rollins, K. Shadon, 660  
 Rollins-Smith, Louise A., **297**, 361  
 Romanello, Milena, **299**, 424  
 Romano, Marco, **292**, 167  
 Romano, Patricia S., **295**, 1000  
 Romanov, Nickolas, **299**, 273  
 Romeo, Domenico, **297**, 1350  
 Romeo, Francesco, **291**, 349  
 Rompaey, L. Van, **291**, 820  
 Ronai, A., **290**, 153  
 Roncarati, Roberta, **295**, 324  
 Rondinone, Cristina M., **293**, 1021; **296**, 1257  
 Rong, Yikang S., **297**, 1  
 Rönnblom, Lars, **291**, 951  
 Roobrouck, Annelies, **297**, 486  
 Roomans, Godfried M., **297**, 552  
 Roomp, Kirsten, **290**, 713  
 Röpke, Thorsten, **291**, 542  
 Ropolo, Alejandro, **290**, 641  
 Rorsman, Fredrik, **291**, 951  
 Ros, M., **296**, 425  
 Rosal, Ramon V., **298**, 439  
 Rosati, Olaf, **293**, 1472; **295**, 198; **297**, 52  
 Roscher, Adelbert A., **291**, 1180  
 Rose, Felicity R. A. J., **292**, 1  
 Rose, Frank, **291**, 1160  
 Rose-John, Stefan, **295**, 532  
 Rösel, Frank, **297**, 125  
 Rosell, Rafael, **296**, 580  
 Rosenberg, Ian, **293**, 366  
 Rosenberg, Lawrence, **291**, 649  
 Rosenberg, Robert, **290**, 1206  
 Rosier, Randy N., **297**, 237  
 Rosmond, Roland, **293**, 629  
 Ross, Henry, **291**, 722  
 Ross, Stuart A., **294**, 798  
 Rostène, William, **295**, 482  
 Roszman, Thomas L., **295**, 540  
 Roszmusz, Emöke, **296**, 156  
 Roth, Jürgen, **295**, 597  
 Rotilio, Giuseppe, **295**, 603  
 Rotin, Daniela, **291**, 945  
 Rotiroti, D., **291**, 255  
 Rottem, Shlomo, **292**, 1289  
 Rougé, Pierre, **296**, 1346  
 Rousseau, Guy G., **292**, 848  
 Rousseau, Joel, **293**, 1544  
 Roux, Bernard, **292**, 874  
 Rovere, Carole, **290**, 1161  
 Rovère-Jovène, Carole, **295**, 841  
 Rovira, Catherine, **296**, 1317  
 Rowe, Peter S.N., **297**, 38  
 Roxas, Bryan, **296**, 755  
 Roynance, Rebecca, **290**, 431  
 Roymans, Dirk, **291**, 400  
 Rozenfurt, Enrique, **291**, 444  
 Ruan, Kangcheng, **293**, 593  
 Ruan, Xiang, **290**, 1128  
 Ruben, Steve, **293**, 478  
 Rubic, Tina, **290**, 988  
 Rubin, Edward M., **290**, 921  
 Ruble, John, **291**, 813  
 Rucks, Elizabeth A., **291**, 91  
 Rudert, William A., **293**, 1426  
 Rudofsky, Ulrich H., **298**, 625  
 Rue, Seok Woo, **295**, 283  
 Ruemmele, F. M., **290**, 1308  
 Ruf, Jean, **295**, 1118  
 Ruffin, Richard E., **297**, 1062  
 Rufo, Caterina, **290**, 1295  
 Ruggiero, Marco, **290**, 820  
 Ruiz-Hidalgo, María José, **291**, 193  
 Ruiz-Pérez, Luis M., **294**, 567  
 Ruker, Florian, **291**, 813  
 Rupp, Johanna, **291**, 421  
 Russell, William E., **290**, 197  
 Russo, D., **293**, 1099  
 Russo, Momtchilo, **292**, 869  
 Russo, Tommaso, **295**, 324  
 Rust, W.L., **293**, 1000; **294**, 1017  
 Rustum, Youcef M., **295**, 435  
 Rutherford, Mark S., **295**, 771  
 Rutter, Guy A., **291**, 439, 1081  
 Ruvinov, Sergei, **291**, 875  
 Ruyechan, William T., **290**, 569  
 Ruzzene, Maria, **290**, 790  
 Ryang, Seung-Ho, **299**, 352  
 Ryder, Timothy A., **292**, 102  
 Ryu, Je-Hwang, **296**, 221  
 Ryu, Seung-Wook, **295**, 495  
 Ryu, SungHo, **297**, 545  
 Ryu, Sung Kee, **291**, 425  
 Ryves, W. Jonathan, **290**, 967  
 Rzymiski, T., **297**, 1049  
 Saad, Sara Teresinha Olalla, 579  
 Saada, Nehad, **296**, 429  
 Sabała, Paweł, **290**, 1015; **296**, 484  
 Sabater, Lidia, **293**, 1066  
 Sabatier, Jean-Marc, **291**, 640  
 Sabetta, Simona, **299**, 418  
 Sabokbar, Afsie, **296**, 261  
 Sabourault, Dominique, **291**, 394  
 Sachar, R.C., **293**, 403  
 Sack, Ragna, **292**, 1044  
 Sá-Correia, Isabel, **292**, 530, 741  
 Sadakane, Yutaka, **295**, 587  
 Sadek, Christine M., **293**, 1333  
 Saegusa, Hironao, **299**, 299  
 Saeki, Megumi, **299**, 268  
 Saeki, Takao, **298**, 779  
 Saeki, Toshihiko, **298**, 392  
 Saeki, Yasushi, **293**, 986; **296**, 813  
 Saeki, Yoshiko, **290**, 140  
 Safe, Stephen, **294**, 384  
 Saffar, Line, **296**, 507  
 Safford, Kristine M., **294**, 371  
 Safford, Shawn D., **294**, 371  
 Sagami, Ikuko, **299**, 169  
 Sagane, Yoshimasa, **292**, 434  
 Sagara, Junji, **293**, 1314  
 Saharinen, Pipsa, **296**, 139  
 Saho, Teruyuki, **297**, 329  
 Saida, Kaname, **297**, 1339  
 Saido, Takaomi C., **293**, 1228  
 Saint, David A., **294**, 347  
 Sairam, M. Ram, **295**, 1096  
 Saisho, Hiromitsu, **292**, 121  
 Saito, Hirohisa, **297**, 1282  
 Saito, Hironori, **296**, 523  
 Saito, Junya, **290**, 311  
 Saito, K., **295**, 630  
 Saito, Kayo, **290**, 1478  
 Saito, Masayuki, **290**, 1478  
 Saito, Naoaki, **295**, 376; **298**, 738; **299**, 641  
 Saito, Rintaro, **290**, 1108  
 Saito, Seiichiro, **290**, 1349  
 Saito, Shihori, **291**, 915  
 Saito, Shuichi, **294**, 1023  
 Saito, Takafumi, **293**, 150  
 Saito, Takeshi, **297**, 517  
 Saito, Toshiki, **291**, 775  
 Saito, Yasushi, **293**, 827; **294**, 231; **295**, 630  
 Saito, Yuichiro, **293**, 332  
 Saitoh, Aki, **293**, 986  
 Saitoh, Hiroshi, **297**, 517  
 Saitoh, Yuko, **290**, 169  
 Saitoh, Yusuke, **296**, 1286  
 Sajedi, Arshia, **291**, 1208  
 Saji, Motoyasu, **296**, 67  
 Sakaeda, Toshiyuki, **294**, 46  
 Sakagami, Hiroyuki, **298**, 793  
 Sakaguchi, Masakiyo, **298**, 24  
 Sakaguchi, Masao, **292**, 153; **296**, 1  
 Sakai, Fumie, **297**, 632  
 Sakai, Hiromi, **295**, 869  
 Sakai, Juro, **293**, 1007  
 Sakai, Naohiko, **290**, 713; **296**, 625  
 Sakai, Norio, **298**, 738  
 Sakai, Ryuichi, **294**, 635  
 Sakai, Takahisa, **297**, 59  
 Sakai, Takehito, **296**, 497  
 Sakakibara, Jun, **295**, 74  
 Sakamoto, Hiromi, **296**, 152  
 Sakamoto, Hiroshi, **294**, 173  
 Sakamoto, Miki, **293**, 1265  
 Sakane, Naoki, **290**, 713  
 Sakano, Seiji, **293**, 1124  
 Sakano, Shinji, **293**, 680  
 Sakashita, Chizuko, **291**, 567  
 Sakashita, Eiji, **297**, 96  
 Sakata, Kaori, **299**, 252  
 Sakate, Mitsue, **297**, 1339  
 Sakisaka, Toshiaki, **299**, 472  
 Sakiyama, Shigeru, **295**, 501  
 Sakoda, Hideyuki, **299**, 291  
 Saku, Keijiro, **298**, 587  
 Sakuma, Tsutomu, **297**, 1297  
 Sakuma, Yoh, **290**, 998  
 Sakuma, Yoko, **291**, 987  
 Sakumoto, Naoko, **291**, 707  
 Sakura, Yasufumi, **297**, 1332  
 Sakurada, Kaori, **291**, 1022  
 Sakuragi, Noriaki, **297**, 558  
 Sakurai, Hiroaki, **297**, 1277  
 Sakurai, Kensuke, **290**, 878  
 Sakurai, Shinya, **293**, 174  
 Sakurai, Takeshi, **290**, 1237  
 Sakuyama, Takanori, **290**, 23  
 Salamon, Michela, **299**, 594  
 Salanski, Piotr, **294**, 145  
 Salardi, Silvana, **290**, 1589  
 Saldeen, Tom, **291**, 349  
 Salgaller, Michael L., **290**, 830  
 Šali, Andrej, **293**, 633  
 Salimath, Bharathi P., **297**, 934  
 Salinas, Matilde, **291**, 560  
 Salles, Jean Pierre, **290**, 851  
 Salles, Jean-Pierre, **295**, 362  
 Salminen, Antero, **298**, 693  
 Salmivirta, Markku, **290**, 146  
 Salmon, M., **297**, 876  
 Salmons, Brian, **293**, 239  
 Salomé, Laurence, **295**, 610  
 Saltin, Bengt, **298**, 309  
 Salvatore, Giuliana, **294**, 813  
 Salvayre, R., **295**, 1052  
 Salvi, Mauro, **290**, 463  
 Salvioli, Stefano, **299**, 539  
 Salzieder, C., **290**, 443  
 Salzieder, E., **290**, 443  
 Samanta, Sudip K., **299**, 404  
 Sampaio, Claudio A.M., **291**, 635  
 Sampaio, Misako, **291**, 635  
 Samudre, Kalpana R., **292**, 312  
 Samuel, Dharmaraj, **294**, 535  
 Samuelsson, Bengt, **290**, 783  
 Samuelsson, Magnus K.R., **296**, 363, 702  
 Sanan-Mishra, Neeti, **296**, 1063  
 Sánchez, J., **299**, 126



- Sánchez, Jorge A., **291**, 1287  
 Sánchez, José J., **296**, 580  
 Sánchez, Julio C., **296**, 1303  
 Sánchez, Luis, **293**, 1028  
 Sánchez-Jiménez, Francisca, **293**, 497  
 Sánchez-Margalet, Víctor, **299**, 525  
 Sancho, Jaime, **291**, 574  
 Sandberg-Nordqvist, Ann-Christine, **291**, 945  
 Sandnes, Dagny, **291**, 588  
 Sandvik, Arne K., **297**, 335  
 Sandy, John D., **293**, 501  
 Sang, Qing-Xiang Amy, **293**, 478  
 Sanij, E., **291**, 191  
 Sankala, Marko, **290**, 1462  
 San Martin, Rody, **295**, 582  
 Sano, Tomoaki, **292**, 362  
 Santamarina-Fojo, Silvia, **295**, 276; **297**, 974  
 Santander, Verónica, **293**, 314  
 Santella, Luigia, **290**, 1015; **296**, 484  
 Santen, Richard J., **294**, 926  
 Santhanam, Ramasamy, **297**, 1075  
 Santibáñez, Juan Francisco, **296**, 267  
 Santillo, Mariarosaria, **295**, 603  
 Santorelli, Filippo, **293**, 521  
 Santoro, Massimo, **290**, 942; **294**, 813  
 Santos, Diógenes Santiago, **295**, 142  
 Santi, Henrikki, **291**, 897  
 Santulli, Maria, **290**, 1393  
 Sanzen, Noriko, **299**, 498  
 Sardi, Iacopo, **299**, 517  
 Sarmah, Bhaskarjyoti, **293**, 1209  
 Sarnat, Harvey B., **299**, 1  
 Sarno, Stefania, **296**, 1366  
 Sarol, Lilen C., **291**, 890  
 Sarti, Paolo, **296**, 1272  
 Sartippour, Maryam, **290**, 602  
 Sartor, Tirso, **295**, 1000  
 Sartori, Geppo, **296**, 1366  
 Sarubbi, Edoardo, **298**, 185  
 Saruta, Takao, **290**, 1275  
 Sasagawa, Noboru, **293**, 800, 1228  
 Sasagawa, Shoko, **290**, 415  
 Sasaki, Hiroki, **296**, 152  
 Sasaki, Hitoshi, **294**, 46  
 Sasaki, Ko, **299**, 116  
 Sasaki, Masahiro, **294**, 210; **296**, 820, 1200; **297**, 143, 558  
 Sasaki, Masao S., **297**, 275  
 Sasaki, Naoki, **290**, 546  
 Sasaki, Nobuyuki, **290**, 973  
 Sasaki, Ryuzo, **296**, 145  
 Sasaki, Tadanori, **290**, 482  
 Sasaki, Takehito, **296**, 62  
 Sasakura, Yukie, **299**, 169  
 Sasisekharan, Ram, **290**, 1206, 1214  
 Sasisekharan, V., **290**, 1214  
 Sassa, Takeshi, **293**, 489  
 Sassano, Antonella, **291**, 744  
 Sasson, Ravid, **294**, 51  
 Sata, Masataka, **297**, 1058  
 Sata, Tetsutaro, **293**, 1084; **294**, 509; **297**, 593  
 Sato, Aya, **295**, 207  
 Sato, Chiemi, **293**, 686  
 Sato, Hitoshi, **294**, 1101  
 Sato, Kazuki, **290**, 1037  
 Sato, Keisuke, **291**, 296  
 Sato, Ken, **296**, 560  
 Sato, Kenzo, **298**, 324  
 Sato, Kiichi, **294**, 470  
 Sato, Kohji, **295**, 463  
 Sato, Makoto, **297**, 523  
 Sato, Mikano, **297**, 1135  
 Sato, Mitsunobu, **292**, 957  
 Sato, Mitsuru, **293**, 1420  
 Sato, Miyuki, **296**, 560  
 Sato, Naoya, **297**, 1277  
 Sato, Nobuhiro, **291**, 55; **298**, 10  
 Sato, Noriko, **297**, 811  
 Sato, Osamu, **292**, 300  
 Sato, Tatsusuke, **298**, 646  
 Sato, Yuzo, **290**, 1199  
 Satoh, Hirokazu, **291**, 1166  
 Satoh, Kazuki, **290**, 756  
 Satoh, Kei, **292**, 274  
 Satoh, Kiyotoshi, **294**, 1151  
 Satomi, Susumu, **296**, 497  
 Satow, Reiko, **295**, 85  
 Satpathy, Minati, **293**, 403  
 Saviranta, Petri, **296**, 1072  
 Savontaus, Marja-Liisa, **291**, 1173  
 Sawa, Hirofumi, **293**, 1084; **294**, 509; **296**, 716; **297**, 593  
 Sawada, Jun-ichi, **296**, 172  
 Sawada, Masatsugu, **292**, 689  
 Sawada, Motoshi, **294**, 363  
 Sawada, Yasufumi, **296**, 644  
 Sawai, Hiroaki, **293**, 1341  
 Sawamura, Tatsuya, **299**, 91  
 Sawatsubashi, Motohiro, **294**, 734  
 Saxena, Amit, **297**, 980  
 Saxild, Nicolaj P.E., **298**, 31  
 Sayós, Joan, **296**, 355  
 Sayor, N., **293**, 924  
 Scafid, Jennifer, **299**, 574  
 Scandurra, Francesca Maria, **296**, 1272  
 Scaramozzino, Natale, **294**, 16  
 Scarpae, Philip J., **291**, 722  
 Schaap, Frank G., **295**, 1156  
 Schade, Andrew E., **296**, 637  
 Schaeublin, Elisabeth, **292**, 216  
 Schafer, Andrew I., **291**, 1014  
 Schallreuter, Karin U., **292**, 805  
 Schatt, Philippe, **291**, 406  
 Schatter, Beate, **297**, 545  
 Schattner, M., **299**, 343  
 Schechter, Lee, **294**, 655  
 Scheel-Toellner, D., **297**, 876  
 Scheffer, George L., **291**, 535  
 Scheinfeld, Meir H., **295**, 324  
 Schem, Christian, **297**, 125  
 Schecker, Rik J., **291**, 535  
 Scherer, Gudrun, **294**, 672  
 Scherer, Günther F.E., **293**, 766  
 Scherman, Daniel, **299**, 29  
 Scherwat, Julia, **292**, 195  
 Scheving, Lawrence A., **290**, 197  
 Schiöth, Helgi B., **299**, 739  
 Schiesser, Rachel L., **291**, 1014  
 Schilling, Karl, **294**, 742  
 Schirmacher, P., **296**, 374  
 Schlötzer-Schrehardt, U., **290**, 743  
 Schliselfeld, Louis H., **290**, 874  
 Schluesener, Hermann J., **298**, 520  
 Schlumberger, Sophie E., **298**, 54  
 Schmid, Marlis, **292**, 1044  
 Schmidt, Harald, **297**, 78  
 Schmitz, Gerd, **293**, 759; **295**, 408  
 Schmitz, Ingo, **297**, 459  
 Schmitz, Udo, **291**, 687  
 Schönbauer, C., **295**, 330  
 Schneider, E. Marion, **297**, 148  
 Schneider, Galen B., **295**, 800  
 Schneider, Gunter, **292**, 128  
 Schneider, Heinz T., **290**, 1539  
 Schnitger, Susanne, **293**, 182  
 Schnyder, Bruno, **292**, 841  
 Schnyder-Candrian, Silvia, **292**, 841  
 Schoen, Susan R., **294**, 700  
 Schoene, Norberta, **292**, 1104  
 Schoester, Martijn, **291**, 535  
 Schofield, Christopher J., **292**, 66  
 Schon, Eric A., **293**, 521  
 Schoner, Wilhelm, **297**, 154  
 Schönberg, S., **296**, 189  
 Schöneberg, Torsten, **298**, 657  
 Schoofs, Liliane, **296**, 1112; **297**, 1140; **299**, 312  
 Schramm, Matthias, **296**, 343  
 Schrier, Robert W., **292**, 771; **293**, 913; **299**, 285  
 Schröder, Henning, **290**, 1539  
 Schubert-Zsilavecz, Manfred, **290**, 185  
 Schultz, Richard M., **291**, 1119  
 Schulz, Horst, **292**, 1171  
 Schulz, Richard, **296**, 937  
 Schulze, E., **297**, 1049  
 Schulzke, Jörg Dieter, **298**, 657  
 Schumann, Ralf R., **295**, 553  
 Schumann, Robert, **296**, 1026  
 Schumann, S., **294**, 1052  
 Schürmann, A., **292**, 113  
 Schuster, Gertrud U., **293**, 1333  
 Schwartz, Iris, **290**, 682  
 Schwager, Sylva L.U., **297**, 1225  
 Schwartz, Arnold, **293**, 1405  
 Schwartz, Daniel M., **292**, 1017  
 Schwartz, Dean D., **296**, 383  
 Schwartz, George J., **298**, 41  
 Schwarz, Edward M., **297**, 237  
 Schwarze, Per E., **293**, 907  
 Schwindling, Sandra L., **296**, 13  
 Scimonelli, Teresa N., **299**, 739  
 Scoles, Daniel R., **290**, 366  
 Scruggs, Julie, **292**, 41  
 Searle, Gavin J., **291**, 332  
 Sebald, Walter, **292**, 144  
 Sedlak, Miroslav, **298**, 603  
 Seenanukun, Chotirote, **297**, 968  
 Seeger, Werner, **291**, 1160  
 Seftor, Elisabeth A., **295**, 800  
 Seftor, Richard E.B., **295**, 800  
 Segat, Daniela, **295**, 1085  
 Seger, Dalia, **290**, 682  
 Segev, Yardena, **296**, 93  
 Segi, Eri, **290**, 696  
 Seguin, B., **292**, 519  
 Segura, Carmen, **292**, 250  
 Sei, Shizuko, **296**, 1228  
 Seidel, J., **294**, 149  
 Seidman, E.G., **290**, 1308  
 Seifert, Roland, **298**, 824  
 Seiffert, Barbara M., **290**, 359  
 Seiffert, Dietmar, **299**, 569, 744  
 Seimiya, Mika, **292**, 121  
 Sein, Thet Thet, **290**, 1123  
 Sekher Pannala, Ananth, **292**, 175  
 Seki, Motoaki, **293**, 806  
 Seki, Shuji, **296**, 785  
 Seki, Sumihiko, **294**, 199  
 Seki, Yuichi, **296**, 785  
 Sekiguchi, Kiyotoshi, **296**, 73; **299**, 498  
 Sekiguchi, Toshio, **297**, 368  
 Sekine, Hiroki, **295**, 657  
 Sekine, Ichiro, **291**, 130  
 Sekine, Takashi, **290**, 482  
 Sekine, Yuichi, **297**, 811  
 Sellamuthu, Saravanan, **296**, 419  
 Sellers, E.M., **290**, 318  
 Sen, Subhojit, **296**, 983  
 Sen, U., **295**, 125  
 Senda, Takao, **297**, 779  
 Sendo, Fujiro, **294**, 692  
 Sengupta, Bidisa, **299**, 400  
 Sengupta, Pradeep K., **299**, 400  
 Senju, Satoru, **290**, 1022; **294**, 734  
 Senno, Laura del, **292**, 761  
 Seno, Masaharu, **294**, 1040  
 Senoo, Haruki, **293**, 1420  
 Senoo, Makoto, **292**, 992; **298**, 420  
 Senshu, Tatsuo, **290**, 979  
 Senthilkumaran, Balasubramanian, **297**, 632  
 Seo, Byoung-Moo, **295**, 898  
 Seo, Han Geuk, **293**, 862  
 Seo, Hisao, **293**, 680; **297**, 288  
 Seo, Jeong-Jae, **292**, 1081  
 Seo, Sachiko, **294**, 635  
 Seo, S.Y., **296**, 293  
 Seoane, Samuel, **292**, 250  
 Seol, Dai-Wu, **291**, 150, 233; **295**, 515  
 Seol, Wongi, **291**, 158  
 Seong, Baik L., **292**, 682  
 Seong, Baik-Lin, **296**, 434  
 Seong, Gi Hun, **291**, 361  
 Seong, J.K., **299**, 806  
 Seong, Je Kyung, **296**, 1157  
 Seong, Je-Kyung, **296**, 221  
 Seong, Rho Hyun, **295**, 970  
 Serù, Rosalba, **295**, 603  
 Serazin-Leroy, Valérie, **293**, 622

- Seree, Eric, **297**, 249  
 Serikov, Vladimir, **293**, 1405  
 Serpi, Raisa, **293**, 850  
 Serrano, Aurelio, **295**, 890  
 Serrano, Solange Maria de Toledo, **294**, 879  
 Serrano, Aurelio, **294**, 567  
 Sessions, Richard B., **291**, 501  
 Seta, Patrick, **294**, 116  
 Setchell, Brian P., **297**, 492  
 Seth, Divya, **295**, 812; **297**, 390  
 Sethumadhavan, Kandan, **290**, 1343; **297**, 1016  
 Setton, Lori A., **293**, 932  
 Sexton, Patricia S., **295**, 1027  
 Seya, Tsukasa, **290**, 140; **293**, 1364  
 Seyama, Issei, **295**, 452  
 Seyama, Yoshiyuki, **298**, 468  
 Seydel, U., **290**, 427  
 Sgagias, Magda K., **296**, 792  
 Sgarbi, Gianluca, **290**, 1589  
 Sha, Jiahao, **291**, 101  
 Shabahang, Soheyla, **298**, 408  
 Shafqat, Jawed, **295**, 1035  
 Shafran, Y., **290**, 1573  
 Shah, Ishita M., **291**, 979  
 Shakesheff, Kevin M., **292**, 144; **299**, 208  
 Shaltiel, Shmuel, **290**, 682  
 Sham, James S.K., **294**, 1030  
 Shan, Qin, **294**, 655  
 Shanley, Thomas P., **291**, 453; **297**, 1264  
 Shao, Jianghua, **290**, 1101  
 Shao, Jun, **295**, 1  
 Shao, Zhi-Ming, **290**, 602  
 Sharadadevi, A., **298**, 203  
 Sharma, Arun, **290**, 690  
 Sharma, Himani, **295**, 24  
 Sharma, Neelam, **293**, 403  
 Sharma, Sherven, **290**, 91  
 Sharma, Surendra, **298**, 486  
 Sharma, Yagya Valkya, **290**, 1441  
 Sharmila, P., **298**, 247  
 Shaw, Bryan, **294**, 1155  
 Shaw, David M., **290**, 1030  
 Shaw, Jacqui A., **294**, 1161  
 Shaw, S., **295**, 1057  
 Shcherbakov, Dmitry, **299**, 710  
 Shealy, David, **292**, 41  
 Shechter, Ishaiah, **292**, 1261  
 Shei, Gan-ju, **297**, 600  
 Shekhtman, Alexander, **296**, 1222  
 Shellis, R. Peter, **292**, 727  
 Shen, Han-Ming, **291**, 321  
 Shen, Lisong, **291**, 484  
 Shen, Yibing, **294**, 886  
 Shen, Yingjie, **293**, 201  
 Shen, Yuequan, **297**, 1008  
 Shen, Yu-Fei, **290**, 1454  
 Shen, Zhiyuan, **297**, 1191  
 Sheng, Xiaoyang, **292**, 422  
 Shepherd, E.J., **296**, 918  
 Sheppard, Freda, **290**, 1030  
 Sherif, Zaki A., **290**, 796; **291**, 191  
 Shetty, Sreerama, **292**, 184  
 Sheu, Laura, **292**, 980  
 Sheu, Tzong-Jen, **297**, 237  
 Shi, Dashuang, **299**, 581  
 Shi, Yanggu, **294**, 835  
 Shiau, Chia-Yang, **292**, 794  
 Shiba, T., **294**, 615  
 Shibanuma, Motoko, **299**, 360  
 Shibasaki, M., **295**, 630  
 Shibata, Fumi, **297**, 1245  
 Shibata, Hideki, **291**, 1166  
 Shibata, Katsushi, **299**, 142  
 Shibata, Rumiko, **293**, 1348  
 Shibata, Shigenobu, **292**, 318  
 Shibolet, Yoel Moshe, **292**, 441  
 Shibukawa, Yukinao, **292**, 83  
 Shibuya, Hitoshi, **296**, 62  
 Shibuya, Masabumi, **291**, 554  
 Shibuya, Tomomi, **293**, 1420  
 Shibuya, Tomoyoshi, **298**, 10  
 Shichida, Yoshinori, **294**, 205  
 Shida, Kyoko, **290**, 140  
 Shido, Osamu, **298**, 793  
 Shie, Fu-kai, **291**, 1293  
 Shields, Sharon J., **290**, 1328  
 Shigenaga, Judy K., **293**, 145  
 Shigeno, Masaya, **294**, 414  
 Shigenobu, Shuji, **292**, 263  
 Shiina, Hiroaki, **296**, 820  
 Shiina, Masashi, **290**, 268  
 Shikama, Hisataka, **294**, 779  
 Shikama, Yoshiaki, **291**, 484  
 Shim, Chanseob, **290**, 1133  
 Shima, Akihiro, **293**, 327  
 Shimabukuro, Michio, **291**, 675  
 Shimabukuro, Yoshio, **297**, 329  
 Shimada, Hiroshi, **296**, 497  
 Shimada, Noriaki, **293**, 969  
 Shimada, Yasuhito, **297**, 1253  
 Shimakawa, Kozo, **297**, 1332  
 Shimano, Hitoshi, **299**, 291  
 Shimazaki, Kuniko, **297**, 96  
 Shimbara, Satoko, **292**, 689  
 Shimizu, Akio, **290**, 113  
 Shimizu, Hiroko, **299**, 697  
 Shimizu, Isamu, **290**, 280  
 Shimizu, Kazuya, **293**, 45  
 Shimizu, Kenji, **295**, 17  
 Shimizu, Kentaro, **296**, 497  
 Shimizu, Kiyoshi, **291**, 775  
 Shimizu, Makoto, **299**, 91  
 Shimizu, Seiichi, **292**, 609  
 Shimizu, Shunichi, **291**, 130  
 Shimizu, Takahiko, **292**, 999; **294**, 5; **295**, 306, 869; **296**, 729  
 Shimizu, Takahisa, **295**, 489  
 Shimizu, Toru, **299**, 169  
 Shimizu, Yasuaki, **294**, 779  
 Shimizu, Yuko, **295**, 644  
 Shimoda, Nanako, **297**, 323  
 Shimokawa, Hiroaki, **290**, 909; **294**, 981  
 Shimokawa, Teruhiko, **296**, 350  
 Shimomura, Ichiro, **292**, 781  
 Shimomura, Sayaka, **292**, 263  
 Shimomura, Taizou, **298**, 731  
 Shimomura, Takeshi, **290**, 1096  
 Shimonkevitz, Richard P., **290**, 1388  
 Shimono, Chisei, **299**, 498  
 Shimono, Yohei, **290**, 409  
 Shimo-Oka, Tadashi, **294**, 1047  
 Shimotohno, Kunitada, **293**, 993  
 Shimoyama, Manabu, **298**, 87  
 Shimoyama, T., **296**, 1322  
 Shimozaawa, Nobuyuki, **292**, 109  
 Shin, Boo. A., **298**, 251  
 Shin, Dong-Myung, **294**, 818  
 Shin, Hyun-Ju, **299**, 102  
 Shin, Ryong-Woon, **294**, 280  
 Shin, S.J., **299**, 806  
 Shin, Song Yub, **290**, 204, 558; **296**, 1044  
 Shin, Tomoko, **299**, 247  
 Shinbo, Jun, **295**, 501  
 Shindo, Mayumi, **294**, 5; **295**, 306  
 Shindo, Takayuki, **293**, 332  
 Shinkawa, Takashi, **290**, 948  
 Shinko, Toshimasa, **297**, 1332  
 Shinn, Jong-wook, **292**, 1010  
 Shinn, Soon-hyun, **292**, 1010  
 Shinohara, Tokuyuki, **295**, 112  
 Shinotsuka, Chisa, **294**, 254  
 Shinoura, Hitomi, **299**, 142  
 Shinoura, Nobusada, **292**, 347; **293**, 174  
 Shinozaki, Kazuo, **290**, 998; **293**, 806; **293**, 1341  
 Shintani, Norihito, **297**, 427  
 Shintani, Yasushi, **293**, 396  
 Shioda, Seiji, **290**, 1237  
 Shiohara, Masaaki, **293**, 1314  
 Shioji, Izuru, **293**, 517  
 Shiojima, Satoshi, **296**, 544  
 Shiota, Kunio, **290**, 701  
 Shiozawa, Shunichi, **299**, 455  
 Shippenberg, Toni S., **290**, 1545  
 Shirai, Yasuhito, **298**, 738  
 Shiraiishi, Hideaki, **291**, 1225  
 Shirakawa, Hitoshi, **291**, 758  
 Shirakawa, Taro, **292**, 776  
 Shiraki, Katsuya, **297**, 59  
 Shirakusa, Takayuki, **290**, 1551  
 Shirasawa, Takuji, **292**, 999; **294**, 5; **295**, 306, 869; **296**, 729  
 Shiratori, Yasushi, **291**, 868  
 Shirayoshi, Yasuaki, **295**, 112; **299**, 599  
 Shirazi-Beechey, Soraya P., **292**, 1048  
 Shirk, Megan C., **294**, 71  
 Shirotni-Ikejima, Hiroko, **299**, 847  
 Shiurba, Robert, **291**, 508  
 Shiverick, Kathleen T., **294**, 101  
 Shizuka-Ikeda, Masami, **292**, 571  
 Shmueli, Anat, **291**, 732  
 Shoda, Makoto, **295**, 230, 458  
 Shoemaker, Robert H., **296**, 1228  
 Shoji, Keiko, **294**, 46  
 Shoji, Mikio, **292**, 571  
 Shoji, Shozo, **293**, 1107  
 Shojima, Nobuhiro, **299**, 291  
 Shou, Zhangfei, **297**, 368  
 Shoulars, Kevin, **296**, 1083  
 Shoya, Yuko, **294**, 509  
 Shreeve, S. Martin, **290**, 1300  
 Shriver, Zachary, **290**, 1206  
 Shu, Hong-Jin, **293**, 150  
 Shu, Hung-Yu, **292**, 789  
 Shu, Yuyan, **297**, 1008  
 Shuin, Taro, **295**, 657  
 Shukla, Anshuman, **291**, 903  
 Shulenin, Sergey, **295**, 276  
 Shuvaev, Vladimir V., **292**, 83  
 Shyu, Kou-Gi, **291**, 185; **296**, 710  
 Si, Xiaoe, **292**, 675  
 Sibuet, S., **297**, 1197  
 Siculella, Luisa, **299**, 418  
 Siddiqui, Arif, **297**, 492  
 Sienkiewicz, W., **298**, 333  
 Siest, Gérard, **292**, 83  
 Siino, Joseph S., **297**, 1318  
 Sikora-Borgula, Aleksandra, **292**, 333  
 Silfverswärd, Carl-Johan, **293**, 451  
 Silks, Louis A. "Pete," **298**, 257  
 Silva-Neto, Mário A.C., **293**, 1358; **296**, 1334  
 Silvennoinen, Olli, **296**, 139  
 Silverman, Mel, **298**, 110  
 Silverstone, Allen E., **291**, 1194  
 Sim, T.S., **295**, 55  
 Simankova, A.N., **293**, 155  
 Simell, Olli, **291**, 1173  
 Simon, L.M., **293**, 416  
 Simon, M. Celeste, **290**, 1228  
 Simona, Rodighiero, **290**, 1564  
 Simons, Brigitte, **298**, 5  
 Simons, Kai, **293**, 30  
 Simonsson, Tomas, **290**, 11  
 Simpson, Leigh G., **297**, 38  
 Sindelar, Pavel J., **296**, 255  
 Sinensky, Michael, **292**, 1279  
 Singer, Alan, **292**, 689  
 Singh, Neeta, **295**, 24  
 Singh, R., **297**, 876  
 Singh, Samer, **296**, 1058; **299**, 345  
 Singh, Vineet K., **290**, 62  
 Singh, Yogendra, **297**, 1121  
 Sinicropo, Frank A., **290**, 1427  
 Sinisterra, Rubén D., **296**, 241  
 Sioud, Mouldy, **295**, 744  
 Sioumpara, Maria, **298**, 574  
 Sironi, Chiara, **290**, 1564  
 Sit, Kwok-Hung, **294**, 934  
 Sivakumar, P., **298**, 247  
 Sivaprasadarao, Asipu, **294**, 191; **297**, 10  
 Sivy, Tami L., **294**, 71  
 Sizer, Phillip, **299**, 377  
 Sjöberg, Mats, **296**, 255  
 Sjöström, Hans, **299**, 35  
 Skak, Kresten, **295**, 243  
 Skerlavaj, Barbara, **293**, 586  
 Skorecki, Karl L., **296**, 93  
 Sköldberg, Filip, **291**, 951  
 Skowasch, Dirk, **294**, 560  
 Skrbec, Damiano, **297**, 1350  
 Slagsvold, Hege H., **291**, 1146  
 Sleight, S., **295**, 561



- Sletten, Knut, **295**, 826  
 Sliva, Daniel, **290**, 552; **298**, 603  
 Slivova, Veronika, **298**, 603  
 Sloan, Denis C., **293**, 640  
 Sloan, Steven R., **290**, 1521  
 Slomiany, Amalia, **294**, 220; **297**, 1149  
 Slomiany, Bronislaw L., **294**, 220; **297**, 1149  
 Słomińska, Monika, **292**, 333  
 Smaih, Monique, **294**, 116  
 Small, Kent W., **295**, 668  
 Smedsröd, B., **296**, 671  
 Smessaert, Jean M., **290**, 1328  
 Smirnova, O.V., **293**, 155  
 Smit, N.P.M., **290**, 844  
 Smith, C.I. Edvard, **299**, 510  
 Smith, Eileen C.J., **294**, 402  
 Smith, Frances J.D., **297**, 818  
 Smith, Gregory E., **296**, 368  
 Smith, R.C., **294**, 1017  
 Smith, Stephen A., **290**, 707  
 Smith, Sylvia B., **291**, 291  
 Smith, Timothy J., **296**, 343  
 Smith, Valerie J., **296**, 167  
 Smith, William J., **295**, 1062  
 Smits, Anja, **296**, 604  
 Smolenski, Albert, **293**, 1438  
 Smulson, Mark E., **290**, 796; **291**, 191  
 Snellen, Harold G., **291**, 722  
 Snoeckx, K., **296**, 1267  
 Snoeij, Pauli, **291**, 344  
 Snyderman, Ralph, **293**, 647  
 So, Hong-Seob, **291**, 663  
 So, Sang Sup, **296**, 401  
 Soares-Costa, A., **296**, 1194  
 Sobiesiak-Mirska, Joanna, 823  
 Sobue, Kenji, **295**, 756  
 Sobue, T., **290**, 526  
 Soda, Kenji, **298**, 632  
 Söder, Olle, **297**, 492  
 Söder, S., **290**, 743  
 Söderqvist, Henrik, **294**, 354  
 Soeta, Chie, **292**, 709  
 Sogawa, Kazuhiro, **295**, 657  
 Sohara, Yasuyoshi, **290**, 1123  
 Sohn, Tae-Sung, **291**, 1031  
 Sohn, Young-Doug, **293**, 530  
 Sohn, Young-Sook, **294**, 940  
 Sohng, Jae-Kyung, **295**, 832  
 Soininen, Hilka, **298**, 693  
 Sokal, Izabela, **290**, 615  
 Sol-Church, Katia, **293**, 23  
 Solcia, Enrico, **292**, 167  
 Soldati, Laura, **293**, 974  
 Solioz, Marc, **291**, 220  
 Sollazzo, Vincenzo, **292**, 761  
 Solomon, Curtis Scott, **291**, 458  
 Solomon, Travis E., **293**, 1014  
 Solov'eva, Olga V., **293**, 1047  
 Solovjeva, Lioudmila V., **297**, 1318  
 Solovjeva, Olga N., **294**, 155  
 Söltz-Szöts, Josef, **299**, 688  
 Soma, Masayoshi, **297**, 1135  
 Somaï, Sonia, **295**, 482  
 Someki, Iori, **294**, 429  
 Someno, Tetsuya, **298**, 178  
 Sommi, Patrizia, **292**, 167  
 Son, Hyeon, **298**, 262  
 Son, Kyung-No, **290**, 236  
 Son, Myung Jin, **290**, 325  
 Son, Seong Gon, **299**, 652  
 Son, Yong, **291**, 663  
 Sonaka, Ichiro, **291**, 738; **299**, 693  
 Sone, Hideko, **292**, 368  
 Sone, Takayuki, **296**, 813  
 Song, Chao-Zhong, **296**, 118  
 Song, Dae-Kyu, **290**, 1506; **298**, 230  
 Song, Haiyan, **299**, 291  
 Song, Hyunkeun, **298**, 289  
 Song, Hyun Seok, **290**, 325  
 Song, Jianbo, **299**, 505  
 Song, Kye-Yong, **296**, 1238  
 Song, Min Dong, **290**, 35  
 Song, Pill-Soon, **298**, 457  
 Song, Robert X.-D., **294**, 926  
 Song, Seung-Yual, **295**, 903  
 Song, Woo Keun, **290**, 558  
 Song, Wook, **290**, 47; **294**, 1093  
 Song, Yeong Wook, **295**, 119, 937; **299**, 549  
 Song, Yonghai, **299**, 910  
 Song, Yuhua, **296**, 300  
 Sonneveld, Pieter, **291**, 535  
 Sonoda, Yoshiko, **293**, 174  
 Sood, Raman, **294**, 1114  
 Sopory, Sudhir Kumar, 1063  
 Sorci, Leonardo, **297**, 835  
 Sosa, Miguel A., **295**, 1000  
 Sotkis, A.V., **293**, 132  
 Sotomaru, Yusuke, **290**, 1499  
 Soubeyran, Philippe, **297**, 607  
 Souchelnyskyi, Serhiy, **290**, 1321  
 Sovová, Vlasta, **290**, 790  
 Spaargaren, Marcel, **298**, 80  
 Spain, Jim C., **296**, 779  
 Spandidos, Demetrios A., **298**, 574  
 Sparks, Charles E., **297**, 134  
 Sparks, Janet D., **297**, 134  
 Sparrow, Carl P., **294**, 88  
 Speit, Günter, **299**, 787  
 Spencer, C. Ian, **292**, 208  
 Spijler, D., **290**, 629  
 Spilde, Troy L., **293**, 691  
 Spindler, M.P., **296**, 374  
 Spindler, Matthias, **298**, 163  
 Spinelli, Giovanni, **295**, 519  
 Spriet, Lawrence L., **294**, 301  
 Srivastava, Tushar K., **295**, 198  
 Stabley, Deborah L., **293**, 23  
 Stadtman, Earl R., **290**, 62  
 Stahl, P.D., **291**, 516  
 Staiger, Harald, **296**, 125; **299**, 853  
 Stakland, Silje, **297**, 468  
 Stalleicken, Dirk, **290**, 1539  
 Stamatiou, Dimitri, **296**, 1134  
 Stamatoyannopoulos, George, **296**, 118  
 Stamm, Stefan, **290**, 1054  
 Stamme, Cordula, **295**, 553  
 Stangl, Karl, **291**, 542; **294**, 315  
 Stangl, Verena, **291**, 542  
 Stapleton, David, **293**, 892  
 Stark, Kenneth, **292**, 593  
 Stasch, Johannes-Peter, **292**, 1057  
 Stawikowski, Maciej, **292**, 855  
 Stawowy, Philipp, **293**, 1431; **296**, 890  
 Stearman, Randi P., **296**, 368  
 Steck, Eric, **299**, 109  
 Steck, Theodore L., **290**, 488  
 Steensberg, Adam, **296**, 1264  
 Steffensen, Knut R., **293**, 1333  
 Stein, Jürgen, **290**, 504  
 Stein, Olga, **290**, 1376  
 Stein, Paula, **291**, 1119  
 Stein, Yechezkiel, **290**, 1376  
 Steiner, Jürgen M., **293**, 747  
 Steiner, Mitchell S., **295**, 129, 136; **296**, 281  
 Steiner, Walter, **297**, 232  
 Steinhelper, Mark E., **297**, 870  
 Steinhilber, Dieter, **290**, 185, 504; **295**, 985  
 Steinitz, Michael, **292**, 832  
 Steinkrüger, S., **295**, 330  
 Steinmeyer, Andreas, **290**, 504  
 Stelter, Lars, **291**, 542  
 Stenberg, Leisa M., **295**, 689  
 Stenflo, Johan, **295**, 689  
 Stephen, Andrew G., **296**, 1228  
 Stern, Andrew M., **299**, 569, 744  
 Stern, Peter L., **290**, 1030  
 Stern, Robert, **292**, 819  
 Stern, Ryan E., **297**, 987  
 Stevenson, Mary Ann, **291**, 1071  
 Stevenson, Mary C., **290**, 197  
 Steward, Shirley A., **292**, 916  
 Stewart, Alasdair, **299**, 62  
 Stewart, Alexandre F.R., **294**, 791; **296**, 1279  
 Stewart, Colin L., **291**, 522  
 St George-Hyslop, Peter, **290**, 1408; **292**, 517  
 Stiger, Fredrik, **293**, 13  
 Stobiecki, Maciej, **294**, 145  
 Stock, Jeffrey L., **290**, 839  
 Stockwell, Brent R., **293**, 1204  
 Stoica, Bogdan A., **299**, 201  
 Stoilov, Peter, **290**, 1054  
 Stoll, Stefan W., **295**, 1108  
 Stone, P.C.W., **295**, 1150  
 Stone, Shane, **293**, 1053  
 Stonik, John A., **297**, 974  
 Storci, Gianluca, **299**, 539  
 Storkson, Jayne M., **294**, 785  
 Stoyanov, Jivko V., **295**, 616  
 St-Pierre, Yves, **296**, 864; **297**, 765  
 Strack, Volker, **290**, 85  
 Stracke, R., **293**, 602  
 Straface, Elisabetta, **290**, 1393  
 Straganz, Grit, **297**, 232  
 Strasberg-Rieber, Mary, **297**, 943  
 Straub, Volker, **291**, 1283  
 Strauss, Harold C., **295**, 223  
 Stricker-Krongrad, Alain, **292**, 1031; **296**, 129  
 Stridh, Helene, **292**, 904; **298**, 338  
 Strive, Tanja, **291**, 966  
 Strnad, Joann, **293**, 1508  
 Strong, Randy, **294**, 136  
 Strzadala, Leon, **294**, 1036  
 Stubbe, Henning, **296**, 134  
 Stumpo, Deborah J., **291**, 1119  
 Sturiale, Luisella, **292**, 222  
 Sturrock, Edward D., **297**, 1225  
 Su, Sheng-Fang, **292**, 632  
 Su, Xiaodi, **290**, 962  
 Su, Zhiguo, **293**, 958  
 Subauste, Jose S., **294**, 35  
 Suda, Haruhiko, **291**, 1265  
 Suda, Makoto, **293**, 542  
 Suda, Michio, **291**, 987  
 Suda, Shiro, **291**, 1265  
 Suda, Takeshi, **291**, 210  
 Suda, Tatsuo, **297**, 1332  
 Suda, Toshio, **292**, 667; **293**, 1124; **298**, 731  
 Sudhakumari, Cheni Chery, **297**, 632  
 Sudo, Haruka, **295**, 621  
 Sudo, Tatsuhiko, **291**, 838  
 Suenaga, Masato, **293**, 396  
 Suenobu, Souichi, **293**, 1124; **298**, 731  
 Su'etsugu, Masayuki, **299**, 42  
 Suetsugu, Shiro, **293**, 1550  
 Sueyoshi, Noriyoshi, **296**, 328  
 Sueyoshi, Tatsuya, **292**, 492  
 Suga, Tetsuya, **299**, 49  
 Sugahara, Kazuyuki, **296**, 1251  
 Sugahara, Kunio, **298**, 235  
 Sugano, Kentaro, **294**, 470  
 Sugano, Sachiko, **295**, 193  
 Sugano, Sumio, **293**, 470  
 Sugano, Yasushi, **295**, 230, 458  
 Sugar, Rosemary, **292**, 216  
 Sugatani, Junko, **292**, 492  
 Sugawara, Yo, **296**, 85  
 Sugihara, Hajime, **294**, 906  
 Sugimoto, Akiko, **293**, 517  
 Sugimoto, Kazushi, **297**, 59  
 Sugimoto, Toshitsugu, **299**, 532  
 Sugimoto, Yoshiyuki, **291**, 995  
 Sugimoto, Yukihiro, **290**, 162, 696; **292**, 675; **298**, 398  
 Sugimura, Haruhiko, **296**, 214  
 Sugimura, Takashi, **296**, 20, 1037  
 Sugino, T., **295**, 255  
 Sugino, Toshihisa, **298**, 785  
 Sugita, Mamoru, **299**, 57  
 Sugita, Takahisa, **297**, 1277  
 Sugita, Yuji, **293**, 1254; **297**, 1282  
 Sugiura, Hisashi, **292**, 776  
 Sugiura, Namino, **290**, 1478  
 Sugiura, Yukio, **296**, 553  
 Sugiya, Hiroshi, **299**, 663  
 Sugiya, A., **297**, 722  
 Sugiyama, Eiji, **298**, 714  
 Sugiyama, Kazuo, **293**, 993  
 Sugiyama, Motohiko, **294**, 912  
 Sugiyama, Toshihiro, **293**, 1420  
 Sugiyama, Yuichi, **299**, 681  
 Sugiyama, Yukihiro, **299**, 18



- Suh, Man-Hee, **299**, 233  
 Suh, Min-Ho, **298**, 230  
 Suh, Pann-Ghill, **298**, 207  
 Suh, Seong-Il, **290**, 1506; **298**, 230  
 Sujkovic, Elizabeth, **291**, 1208  
 Suketa, Yasunobu, **294**, 710  
 Sul, Hei Sook, **293**, 793; **294**, 63  
 Sullivan, Kevin, **293**, 1426  
 Sullivan, Teresa, **291**, 522  
 Sultana, Taranum, **297**, 492  
 Sumi, Tomoyuki, **290**, 1315  
 Sumida, Akihiko, **298**, 433  
 Sumida, Motoo, **290**, 1478  
 Sumimoto, Hideki, **293**, 1571; **299**, 641  
 Sumita, Toru, **294**, 1071  
 Sumiya, Toshiki, **296**, 537  
 Sumizawa, Tomoyuki, **291**, 806  
 Summer, Sandra N., **299**, 285  
 Sumoy, Lauro, **290**, 955  
 Sun, Bing, **297**, 510  
 Sun, Daekyu, **298**, 537  
 Sun, Fang-Zhen, **290**, 613  
 Sun, Kyung-Hoon, **295**, 832  
 Sun, Lan-Ying, **290**, 1454  
 Sun, Li, **299**, 505  
 Sun, Liping, **296**, 991  
 Sun, Rui, **298**, 297  
 Sun, Tie-hua, **293**, 1092  
 Sun, Wenliang, **291**, 1  
 Sun, Woong, **298**, 613  
 Sun, Yi, **295**, 532  
 Sun, Ying-Jie, **290**, 1282  
 Sun, Yu-Long, **295**, 382  
 Sunagawa, Hiroyuki, **292**, 434  
 Sunayama, Jun, **291**, 1022  
 Sung, Chin K., **292**, 308  
 Sung, Ying Ju, **292**, 1063  
 Sunter, David, **293**, 560  
 Superti-Furga, Giulio, **298**, 185; **299**, 510  
 Supply, Thomas, **295**, 841  
 Süsens, Ute, **299**, 872  
 Sutherland, Andrew J., **296**, 857  
 Sutherland, John, **296**, 857  
 Sutoh, Kazuo, **296**, 305  
 Suttitanamongkol, Sudawadee, **297**, 129  
 Suuronen, Tiina, **298**, 693  
 Suzaki, Yuki, **293**, 1458  
 Suzu, Shinya, **296**, 1215  
 Suzuki, Atsushi, **297**, 1324  
 Suzuki, Haruhiko, **292**, 826  
 Suzuki, Harukazu, **290**, 1108  
 Suzuki, Hiromichi, **297**, 255  
 Suzuki, Hiroshi, **298**, 87; **299**, 681  
 Suzuki, Hisano, **295**, 207  
 Suzuki, Itaru, **296**, 698  
 Suzuki, Iwane, **290**, 339  
 Suzuki, Jinya, **293**, 1007  
 Suzuki, Keiichi, **296**, 54  
 Suzuki, Kenji, **294**, 1087  
 Suzuki, Koichi, **290**, 510; **294**, 906  
 Suzuki, Kuniaki, **298**, 240  
 Suzuki, Makoto, **291**, 278; **298**, 41; **299**, 825  
 Suzuki, Misao, **293**, 953, 1265  
 Suzuki, Satoshi, **290**, 169  
 Suzuki, Shingo, **294**, 1087  
 Suzuki, Shunichi, **292**, 709  
 Suzuki, Shunji, **296**, 477  
 Suzuki, Taiga, **297**, 632  
 Suzuki, Takahiro, **293**, 962; **294**, 635  
 Suzuki, Tohru, **294**, 912  
 Suzuki, Toru, **293**, 332  
 Suzuki, Toshikazu, **293**, 293  
 Suzuki, Toshimitsu, **291**, 1134  
 Suzuki, Yasuo, **293**, 827  
 Suzuki, Yasuyuki, **292**, 109  
 Suzuki, Yo-ichi, **295**, 869; **296**, 729  
 Suzuki, Yosuke, **297**, 779  
 Suzuki, Yutaka, **293**, 470  
 Suzuki, Takahiro, **294**, 635  
 Svehag, Sven-Erik, **294**, 309  
 Sveinbjörnsson, B., **296**, 671  
 Svensson, Camilla, **291**, 1194  
 Svetlova, Maria P., **297**, 1318  
 Svoboda, Petr, **291**, 1119  
 Swamynathan, Shivalingappa K., **296**, 451  
 Swe, Myint, **294**, 934  
 Swinnen, Johannes V., **295**, 469  
 Sylvén, Christer, **298**, 505  
 Szabó, Ildikó, **295**, 526  
 Szabó, Tamás, **293**, 777  
 Szabó, Zoltán, **292**, 931  
 Szweczyk, Adam, **294**, 1144  
 Szibor, M., **295**, 1057  
 Szymkowski, David E., **291**, 466  
 Szyszka, Ryszard, **296**, 1310  
 Tabata, Hiroyuki, **298**, 398  
 Tabata, Izumi, **296**, 350  
 Tabuchi, Akiko, **290**, 415  
 Tabuchi, Norihiko, **295**, 149  
 Tabuchi, Yoshiaki, **290**, 498; **293**, 1287  
 Tachibana, Akira, **297**, 275  
 Tachibana, Hirofumi, **295**, 547; **297**, 193  
 Tachibana, Katsuro, **298**, 587  
 Tachibana, Ken, **295**, 489  
 Tachibana, Taro, **295**, 756  
 Tachikawa, Masaji, **291**, 1283  
 Tada, Hiroko, **294**, 1040  
 Tada, Yuji, **292**, 121  
 Tada-Oikawa, Saeko, **297**, 682  
 Tadakuma, Takushi, **296**, 54  
 Tadayyon, Mohammad, **298**, 350  
 Taga, Tooru, **291**, 1297  
 Tagawa, Masatoshi, **292**, 121; **293**, 1132  
 Tagliati, Federico, **297**, 828  
 Taguchi, Hideki, **296**, 8  
 Taguchi, Ikuhiko, **292**, 659  
 Taher, Taher E.I., **298**, 80  
 Taheri, Shahrard, **291**, 1208  
 Tahiri-Alaoui, A., **293**, 924  
 Tai, Chia-Chen, **294**, 900  
 Tailleux, Anne, **293**, 1114  
 Tajima, Shingo, **294**, 1047  
 Tajiri, Takashi, **296**, 152  
 Takabayashi, Maki, **297**, 1324  
 Takagahara, Shuichi, **291**, 995  
 Takagaki, Kazuchika, **296**, 544  
 Takagaki, Keiichi, **293**, 220; **297**, 1167  
 Takagi, Hitoshi, **292**, 492  
 Takagi, Masahiro, **295**, 508  
 Takagi, Masamichi, **294**, 1071  
 Takagi, Masatoshi, **294**, 770  
 Takagi, Mitsuhiro, **299**, 49  
 Takagi, Toshihide, **293**, 344  
 Takahara, Terunao, **298**, 156  
 Takahashi, Fuminori, **292**, 94  
 Takahashi, Hidehiro, **293**, 1084; **294**, 509; **297**, 593  
 Takahashi, Hitoshi, **293**, 993  
 Takahashi, Ichiro, **293**, 1107  
 Takahashi, K., **295**, 630  
 Takahashi, Kazuo, **294**, 231  
 Takahashi, Kenji, **293**, 1530  
 Takahashi, Kenzo, **290**, 696  
 Takahashi, Kohji, **297**, 1205  
 Takahashi, Masaharu, **290**, 242  
 Takahashi, Masahide, **290**, 409; **292**, 642; **294**, 642  
 Takahashi, Megumi, **291**, 385  
 Takahashi, Motoko, **292**, 83  
 Takahashi, Sadao, **293**, 1007  
 Takahashi, Shinji, **296**, 497  
 Takahashi, Yasumitsu, **297**, 517  
 Takahata, Yoshihisa, **293**, 1348  
 Takai, Yasushi, **292**, 456  
 Takai, Yoshimi, **293**, 45; **299**, 472  
 Takakura, Nobuyuki, **293**, 1124; **298**, 731  
 Takakura, Yoshinobu, **293**, 344; **299**, 389  
 Takama, Michiho, **293**, 1107  
 Takamatsu, Ken, **291**, 1265  
 Takami, Hiroshi, **292**, 88  
 Takamune, Nobutoki, **293**, 1107  
 Takano-Yamamoto, Teruko, **299**, 755  
 Takao, Noriaki, **299**, 697  
 Takao, Sonshin, **295**, 300  
 Takara, Kohji, **292**, 190  
 Takarada, Takeshi, **297**, 452  
 Takasaki, Chikahisa, **295**, 657  
 Takashima, Yuji, **290**, 113  
 Takasu, Nobuyuki, **291**, 675  
 Takata, Takumi, **294**, 1047  
 Takata, Yasunori, **290**, 1255  
 Takatsu, Yoshihiro, **293**, 396  
 Takatsuki, Akira, **291**, 494  
 Takayama, Eiji, **296**, 54  
 Takayama, Yoshiharu, **299**, 813  
 Takayanagi, Shin-ichiro, **299**, 410  
 Takechi, Shinji, **299**, 263  
 Takeda, Hiroaki, **293**, 150  
 Takeda, Katsuo, **297**, 779  
 Takeda, Ken, **295**, 489  
 Takeda, Kozue, **292**, 826  
 Takeda, Masatoshi, **296**, 313  
 Takeda, Shin'ichi, **293**, 1265  
 Takedachi, Masahide, **297**, 329  
 Takeguchi, Noriaki, **293**, 1287  
 Takehana, Kenji, **293**, 945  
 Takei, Kohji, **294**, 261  
 Takei, Yoshiyuki, **291**, 55; **298**, 10  
 Takemori, Akihiro, **294**, 1177  
 Takemoto, Yasuhiko, **292**, 109  
 Takemura, Tetsuo, **296**, 233  
 Takenaga, Keizo, **297**, 346  
 Takenawa, Tadaomi, **291**, 41; **293**, 93, 1550; **297**, 214  
 Takeoka, Shinji, **296**, 765  
 Takeshima, Hiroshi, **292**, 318  
 Takeshita, Akira, **290**, 909; **299**, 384  
 Takeshita, Norio, **298**, 103  
 Taketani, Yuji, **292**, 456; **296**, 102  
 Taketani, Yuuji, **290**, 263  
 Taketomi, Shigehisa, **297**, 1332  
 Takeuchi, Hideaki, **291**, 23  
 Takeuchi, Kosei, **299**, 641  
 Takeuchi, Masayoshi, **290**, 973; **296**, 877; **297**, 419; **299**, 183  
 Takeuchi, Tomonori, **293**, 953  
 Takeuchi, Toru, **291**, 76; **297**, 1238  
 Takeuchi, Yoshiaki, **290**, 1289  
 Takeya, Motohiro, **290**, 1022  
 Takeya, Ryu, **299**, 641  
 Takeyama, Sadaaki, **298**, 240  
 Takeyasu, Takeshi, **290**, 1199  
 Takezawa, Toshiaki, **299**, 813  
 Takigawa, Masaharu, **295**, 445; **297**, 255; **299**, 755  
 Takigawa, Yuki, **299**, 366  
 Takiguchi, Masafumi, 348  
 Takiguchi, Masaki, **290**, 510  
 Takimoto, Mitsuhiro, **291**, 210  
 Takizawa, Hajime, **290**, 1139  
 Takizawa, Norio, **297**, 773  
 Takuwa-Kuroda, Kyoko, **291**, 1187; **294**, 760  
 Talent, John M., **293**, 1566  
 Talim, Beril, **291**, 1283  
 Tallet, Dominique, **290**, 125  
 Tam, Joseph, **291**, 649  
 Tam, Po-Chor, **296**, 1104  
 Tamada, Hiroshi, **297**, 96  
 Tamai, Yoshitaka, **298**, 714  
 Tamaki, Masakatsu, **295**, 869  
 Tamaki, Norihiko, **291**, 669  
 Tamaki, T., **299**, 555  
 Tamaki, Toshiaki, **293**, 1458  
 Tamamori-Adachi, Mimi, **296**, 274  
 Tamatani, Michio, **295**, 463  
 Tambourgi, Denise V., **298**, 638  
 Tamekane, Akira, **298**, 87  
 Tamiya, Eiichi, **294**, 1138  
 Tamiya, Gen, **297**, 1171  
 Tamiya-Koizumi, Keiko, **294**, 363  
 Tammara, Paolo, **291**, 1095  
 Tamogami, Shigeru, **295**, 1041  
 Tamura, Masakazu, **291**, 855  
 Tamura, Shinji, **292**, 781  
 Tamura, Taka-aki, **296**, 1097  
 Tamura, Yasuharu, **296**, 1329  
 Tan, Weihong, **292**, 31  
 Tan, Xiaoyu, **293**, 1412  
 Tan, Ying-Cai, **297**, 653  
 Tanabe, Chikako, **296**, 152  
 Tanabe, Mizuho, **295**, 945  
 Tanabe, Shoko, **294**, 205

- Tanabe, Soichi, **293**, 1348  
 Tanabe, Tsutomu, **299**, 299  
 Tanaka, Einosuke, **297**, 341  
 Tanaka, Fumiko, **296**, 26  
 Tanaka, Hideaki, **295**, 348  
 Tanaka, Isao, **290**, 546, 1114; **298**, 779  
 Tanaka, Keiichi, **299**, 903  
 Tanaka, Keiko, **292**, 776  
 Tanaka, Kenichi, **298**, 714  
 Tanaka, Kiyoshi, **291**, 987  
 Tanaka, Masamitsu, **296**, 214  
 Tanaka, Masao, **292**, 474  
 Tanaka, Masashi, **290**, 1199  
 Tanaka, Minoru, **293**, 327  
 Tanaka, Nobuhiko, **294**, 1047  
 Tanaka, Nobuyoshi, **297**, 375  
 Tanaka, Noriaki, **290**, 1101; **296**, 20  
 Tanaka, Saiyu, **291**, 48  
 Tanaka, Satoshi, **290**, 701; **297**, 1205; **298**, 398  
 Tanaka, Seiya, **290**, 73  
 Tanaka, Shinya, **296**, 716  
 Tanaka, Takahiro, **296**, 233  
 Tanaka, Takeshi, **295**, 508  
 Tanaka, Tatsuo, **297**, 1350  
 Tanaka, Tomoyuki, **294**, 280  
 Tanaka, Toshiaki, **290**, 305  
 Tanaka, Toshiki, **290**, 858  
 Tanaka, Toshio, **295**, 163; **297**, 1253, 1282  
 Tanaka, Yoshinari, **299**, 472  
 Tanaka, Yoshitsugu, **299**, 42  
 Tanaka, Yuichiro, **292**, 482; **294**, 464; **296**, 820, 1200; **297**, 558  
 Tanaka-Kagawa, Toshiko, **296**, 172  
 Tanase, Sumio, **294**, 423  
 Tang, Bing, **296**, 78  
 Tang, Bor Luen, **294**, 923  
 Tang, Chongren, **296**, 111  
 Tang, Guanghua, **296**, 463  
 Tang, Hua, **292**, 667  
 Tang, Ji'an, **295**, 14  
 Tang, Jia-Rong, **290**, 1255  
 Tang, K., **293**, 167  
 Tang, Mei, **297**, 906  
 Tang, Shiow-Shih, **291**, 787  
 Tang, Xiaohui, **292**, 456  
 Tang, Youqi, **291**, 795  
 Tang, Yuntian, **297**, 528  
 Tani, Ayako, **291**, 806  
 Tanida, Isei, **292**, 256; **296**, 1164  
 Tanida-Miyake, Emiko, **292**, 256  
 Tanigami, Akira, **293**, 470  
 Taniguchi, Manabu, **295**, 463  
 Taniguchi, Naoyuki, **292**, 83; **296**, 54; **299**, 410  
 Taniguchi, Shun'ichiro, **293**, 1314  
 Taniguchi, Taizo, **294**, 210; **297**, 143  
 Taniguchi, Takazumi, **290**, 878  
 Tanikawa, Naomi, **291**, 884  
 Taniko, Kaori, **299**, 183  
 Tanimoto, Kyouko, **294**, 779  
 Taniura, Hideo, **297**, 452  
 Tanji, Kunikazu, **292**, 274  
 Tanner, Heidi, **298**, 54  
 Tanoue, Akito, **299**, 142  
 Tao, Xiao, **299**, 216  
 Taoka, Masato, **290**, 948  
 Tarasov, Sergey, **291**, 875  
 Tarbell, John M., **293**, 1466  
 Tardif, Ginette, **291**, 1151  
 Tare, Rahul S., **298**, 324  
 Targos, Berenika, **296**, 484  
 Tari, Ana M., **295**, 784  
 Tarr, Philip E., **295**, 324  
 Tarroux, Roger, **295**, 362  
 Tarugi, Patrizia, **299**, 801  
 Tascou, S., **293**, 816  
 Tashiro, F., **297**, 722  
 Tashkin, Donald P., **290**, 91  
 Tatebe, Shigeru, **290**, 1427  
 Tatsumi, Kouichi, **293**, 120  
 Tauber, Maïté, **290**, 851  
 Taupin, Douglas, **293**, 366  
 Taute, Antje, **298**, 5  
 Tavalali, Shida, **298**, 657  
 Tavaré, Jeremy M., **291**, 439  
 Tavis, Jeffrey H., **295**, 668  
 Tawara, Masayuki, **296**, 1251  
 Taylor, John E., **297**, 828  
 Taylor, Jonathon, **299**, 432  
 Taylor-Jones, Jane M., **296**, 1340  
 Taylormoore, Jonathan M., **290**, 197  
 Tazawa, Shigeki, **290**, 131  
 Teber, Iskender, **295**, 678  
 Tecott, Laurence H., **295**, 249  
 Tedesco, Vivienne C., **297**, 463  
 Teeling, Peter, **298**, 80  
 Tegoni, Mariella, **291**, 1  
 Teisinger, Jan, **297**, 154  
 Teissier, Elisabeth, **293**, 1114  
 Teixeira, Leticia R., **296**, 241  
 Teixeira, Miguel Cachó, **292**, 530, 741; **294**, 82  
 Tejada, Francisco, **293**, 106  
 Tejima, Kazuaki, **297**, 1108  
 Tekle, Michael, **291**, 1128  
 Tekwani, Babu L., **290**, 595  
 Téllez-Valencia, Alfredo, **295**, 958  
 Temsah, Rana M., **293**, 727  
 ten Brinke, Anja, **290**, 532  
 Teng, Felicia Y.H., **294**, 923  
 Teng, Shu-Chun, **291**, 714  
 Tenno, Mari, **298**, 755  
 Tenreiro, Sandra, **292**, 741  
 Tenstad, Ellen, **297**, 912  
 Teo, Chin-Fen, **295**, 167  
 Terada, Kunihiro, **293**, 1420  
 Terada, Masaaki, **296**, 152  
 Terada, Shin, **296**, 350  
 Teraishi, Fuminori, **290**, 1101  
 Terakura, Mami, **297**, 329  
 Teramura, Yuji, **296**, 765  
 Teran-Garcia, Margarita, **290**, 1295  
 Teranishi, Hiroko, **297**, 918  
 Terao, Junji, **293**, 1458  
 Terao, Yasuko, **293**, 396  
 Terao, Yutaka, **296**, 1329  
 Teraoka, Hirobumi, **292**, 268  
 Terasaki, Yasuhiro, **290**, 1022  
 Terashima, Yoshiaki, **298**, 785  
 Teratani, Takumi, **291**, 623  
 Terauchi, Ryu, **293**, 1530  
 Terhorst, Cox, **291**, 574  
 Ternan, Nigel G., **290**, 802  
 Terra, Walter R., **290**, 494  
 Terranegra, Annalisa, **293**, 974  
 Teshima, Shigetada, **290**, 984  
 Testa, Elisabetta, **294**, 872  
 Testai, Fernando D., **295**, 791  
 Tetsuka, Toshifumi, **291**, 890  
 Têtu, Bernard, **293**, 1544  
 Teunissen, Birgit E. J., **292**, 71  
 Tezel, Gaye, **290**, 409  
 Tezuka, Michiko, **290**, 1349  
 Thai, Shelley N.-M., **293**, 501  
 Thakur, Indu Shekhar, **290**, 770  
 Thakurta, Piyali Guha, **295**, 125  
 Thant, Aye Aye, **290**, 1123  
 Thattaliyath, Bijoy D., **297**, 870  
 Theoleyre, S., **293**, 38  
 Thielemans, Leen, **293**, 1223  
 Thiemann, O.H., **296**, 1194  
 Thiery, J., **298**, 798  
 Thiery, J.P., **294**, 108  
 Thody, A.J., **290**, 844  
 Thody, Anthony J., **296**, 698  
 Thoma, Richard S., **292**, 236  
 Thomas, Gregory W., **290**, 1388  
 Thomas, James, **296**, 1143  
 Thomas, John A., **291**, 215; **292**, 787  
 Thomas, Pamela M., **295**, 312  
 Thomas, Veena L., **293**, 1197  
 Thömmes, Kerstin, **291**, 687  
 Thompson, Keith, **290**, 869  
 Thompson, Lorin A., **299**, 569  
 Thompson, Nancy, **295**, 174  
 Thompson, Paul D., **299**, 730  
 Thoresen, G. Hege, **291**, 588  
 Thornemo, Maria, **291**, 951  
 Tian, Furong, **292**, 355  
 Tian, Zhigang, **298**, 297  
 Tibbles, Heather E., **292**, 987  
 Tien, Po, **299**, 897  
 Tigani, Bruno, **292**, 216  
 Tiribelli, Claudio, **293**, 100  
 Tiso, Natascia, **299**, 594  
 Tizzei, Edna Vedelago, **294**, 579  
 Tjwa, Marc, **295**, 428  
 Tobin, Darren, **299**, 155  
 Tobin, James F., **298**, 545  
 Toda, Ken-Ichi, **291**, 780  
 Toda, Shuji, **294**, 906  
 Toda, Takashi, **290**, 1399  
 Toda, Tatsushi, **291**, 1283  
 Toda, Tosifusa, **295**, 112  
 Todisco, Andrea, **290**, 1289  
 Togawa, Tatsuo, **299**, 285  
 Togo, Shinji, **296**, 497  
 Toguchida, Junya, **295**, 354  
 Toh-e, Akio, **293**, 986; **296**, 813; **294**, 687  
 Tohse, Noritsugu, **294**, 199  
 Tohyama, Chiharu, **292**, 368  
 Tohyama, Kaoru, **297**, 664  
 Tohyama, Masaya, **295**, 463; **296**, 313  
 Tohyama, Yumi, **297**, 664  
 Toivonen, Minna, **291**, 1173  
 Tojo, Hideaki, **292**, 709  
 Tokuda, Shinsaku, **298**, 619  
 Tokuhisa, Takeshi, **291**, 567; **292**, 121  
 Tokumitsu, Hiroshi, **292**, 1023  
 Tokunaga, Akira, **296**, 152  
 Tokunaga, Katsushi, **291**, 17; **296**, 194  
 Tokuyama, Shogo, **290**, 482  
 Toma, Alessandro, **296**, 840  
 Tomari, Shinsuke, **290**, 177  
 Tomaru, Yasuhiro, **290**, 1499; **296**, 497  
 Tomaselli, Gordon F., **291**, 111  
 Tomasini, Richard, **290**, 641  
 Tömböly, Cs., **290**, 153  
 Tombran-Tink, Joyce, **294**, 764  
 Tomidokoro, Yasushi, **292**, 571  
 Tomilin, Nikolai V., **297**, 1318  
 Tomimatsu, Takuji, **292**, 675  
 Tomimori, Yoshiaki, **290**, 1478  
 Tominaga, Makoto, **290**, 1237  
 Tominaga, Mitsutoshi, **297**, 473  
 Tominaga, Shin-ichi, **299**, 18  
 Tomita, Naoto, **297**, 1324  
 Tomiya, Tomoaki, **290**, 898; **297**, 1108  
 Tomiyama, Arata, **291**, 1022  
 Tomkinson, Birgitta, **296**, 41  
 Tømmerås, Karin, **297**, 335  
 Tomoo, Koji, **294**, 210  
 Tomooka, Yasuhiro, **297**, 473  
 Ton, Christopher, **296**, 1134  
 Tonami, Kazuo, **295**, 489  
 Toney, Glenn M., **297**, 870  
 Tong, Liang, **299**, 216  
 Tong, Wei-Gang, **296**, 942  
 Tong, Wen-Yan, **299**, 366  
 Toninello, Antonio, **290**, 463  
 Topaloglu, Haluk, **291**, 1283  
 Torfs, P., **299**, 312  
 Torigoe, Takayuki, **295**, 945  
 Torii, Eiko, **290**, 696  
 Torpier, Gérard, **293**, 1114  
 Torres-Bacete, Jesús, **291**, 593  
 Torres-Guzmán, Raquel, **291**, 593  
 Torri, Giangiacomo, **292**, 222  
 Tota, Laurie M., **297**, 600  
 Totaro, Maria Serena, **297**, 607  
 Tóth, Attila, **293**, 777  
 Tóth, G., **290**, 153  
 Toth, J., **293**, 18  
 Toth, Monica, **290**, 830  
 Tou, Jen-sie, **292**, 951  
 Towler, Eric, **296**, 1228  
 Toya, Tetsuya, **292**, 1087  
 Toyama, Hirohide, **299**, 268  
 Toyama, Yoshiaki, **293**, 61  
 Toyoda, Masahiko, **299**, 857  
 Toyoda, Nobuaki, **298**, 675



- Toyoda, Tetsuya, **290**, 1188; **293**, 698
- Tozaki, Hidetoshi, **294**, 42
- Tözsér, József, **294**, 949
- Traganos, Frank, **296**, 1077
- Trager, James B., **298**, 144
- Trapassi, Chiara, **299**, 539
- Trappe, R., **293**, 816; **296**, 319; **297**, 1049
- Traub, Otto, **296**, 721
- Travis, James, **294**, 423
- Traxler, Peter, **290**, 197
- Trayhurn, Paul, **296**, 458
- Tremblay, Jacques P., **293**, 1544
- Trevors, J.T., **299**, 634
- Trew, Geoffrey H., **292**, 102
- Trexler, Mária, **296**, 156
- Trif, Mihaela, **293**, 918
- Trincão, Jose, **297**, 1085
- Tripathi, Abhai K., **290**, 595
- Tripathy, Baishnab C., **291**, 921; **299**, 751
- Tronchère, Hélène, **291**, 305
- Trotot, Pascale, **298**, 282
- Troxler, Heinz, **292**, 1044; **299**, 857
- Truong-Tran, Ai Q., **297**, 1062
- Trusheim, Heidi, **297**, 78
- Tryggvason, Karl, **290**, 1462
- Trzonkowski, Piotr, **292**, 333
- Tsai, Ah-Lim, **290**, 294
- Tsai, Li-Jen, **298**, 805
- Tsai, Pai-Chi, **291**, 1293
- Tsai, Ying-Chieh, **291**, 165
- Tsai, Yun-Luen, **291**, 714
- Tsan, Min-Fu, **291**, 1001
- Tsang, Fai, **293**, 72
- Tsang, William Y., **291**, 8
- Tsao, Yeou-Ping, **298**, 805
- Tsay, Huey-Jen, **291**, 1293
- Tschachler, Erwin, **293**, 722; **299**, 688
- Tschen, Johannes Scheng-Ming, **292**, 789
- Tse, Jenny Y.M., **296**, 1104
- Tseng, Yi-Hsiung, **291**, 338; **295**, 43
- Tseng, Yiider, **296**, 771
- Tsuboi, Daisuke, **292**, 697
- Tsuboyama-Kasaoka, Nobuyo, **296**, 395
- Tsuchida, Eishun, **295**, 869; **296**, 765
- Tsuchida, Nobuo, **297**, 17, 1302
- Tsuchida, Shigeki, **292**, 274
- Tsuchiya, Koichiro, **293**, 1458
- Tsuchiya, Noriko, **295**, 207
- Tsuchiyama, Yoshiyuki, **291**, 915
- Tsuda, Fumio, **290**, 242
- Tsuda, Kazushi, **294**, 359; **297**, 672
- Tsuda, Masaaki, **290**, 415
- Tsuda, Masumi, **296**, 716
- Tsuda, Sakae, **298**, 46
- Tsuda, Satoshi, **290**, 1354
- Tsuji, Akihiko, **290**, 878
- Tsuji, Hiroshi, **295**, 149
- Tsuji, Hitomi, **297**, 1171
- Tsuji, Keitaro, **295**, 621
- Tsuji, Lyuji, **294**, 770
- Tsuji, Naoki, **293**, 653
- Tsuji, Takanori, **294**, 287
- Tsujii, Ken-ichi, **290**, 713; **296**, 625
- Tsujimoto, Gozoh, **296**, 85, 544; **297**, 1282; **299**, 142
- Tsujimoto, Masafumi, **290**, 1048
- Tsujimoto, Masayuki, **292**, 190
- Tsujino, Natsuko, **290**, 1237
- Tsujita, Mika, **293**, 953
- Tsukamoto, Hiroshi, **298**, 450
- Tsukamoto, Kosuke, **290**, 713; **296**, 625
- Tsukamoto, Makoto, **298**, 17
- Tsukamoto, Tadashi, **294**, 429
- Tsukui, Tohru, **299**, 222
- Tsumoto, Kouhei, **295**, 31
- Tsunawaki, S., **296**, 1322
- Tsunoda, Tatsuhiko, **292**, 498
- Tsuruoka, Nobuo, **290**, 1478
- Tsuruoka, Shuichi, **298**, 41
- Tsushima, Robert, **292**, 980
- Tsutsumi, Kazuyoshi, **291**, 1187
- Tsutsumi, Osamu, **291**, 76; **292**, 456; **299**, 222
- Tsutsuura, Masaaki, **294**, 199
- Tsygankov, Alexander, **292**, 892
- Tubbs, Kemmons A., **297**, 401
- Tuchman, Mendel, **299**, 581
- Tuena de Gómez-Puyou, Marieta, **295**, 958
- Tuhácková, Zdena, **290**, 790
- Tulis, David A., **291**, 1014
- Tun, Zaw, **297**, 341
- Tuna, Musaffe, **295**, 784
- Tunstall, Rebecca J., **294**, 301
- Turano, Carlo, **295**, 67
- Turchi, L., **293**, 112
- Turk, John, **291**, 692
- Turnbull, Doug, **291**, 372
- Turner, Corey W., **290**, 29
- Turner, K., **293**, 924
- Turpeinen, Miia, **293**, 850
- Turunen, Mikael, **296**, 255
- Tuszynski, J.A., **293**, 602
- Tuteja, Narendra, **294**, 334; **296**, 1063
- Tyagi, Neetu, **297**, 1075
- Tyagi, Sandhya, **292**, 937
- Tygstrup, Niels, **290**, 518
- Tyler, Susan J., **291**, 501; **299**, 373
- Tyndale, R. F., **290**, 318
- Tyrer, Peter, **299**, 377
- Tytgat, Jan, **299**, 562
- Tzavra, Eleni Th., **292**, 231
- Tzeng, Shwu-Jen, **291**, 270
- U, Mami, **293**, 1254
- Uccelletti, Daniela, **298**, 559
- Ucer, K. B., **292**, 812
- Uchida, Daisuke, **292**, 957
- Uchida, Hiroaki, **292**, 347
- Uchida, Hiroko, **290**, 1551
- Uchida, Masao, **294**, 521
- Uchida, Yohzo, **292**, 13
- Uchida, Yo-ichi, **297**, 1297
- Uchide, Tsuyoshi, **297**, 1339
- Uchimiya, Hiroshi, **291**, 806
- Uchino, Makoto, **290**, 1042
- Uchiumi, Takeshi, **296**, 644
- Uchiyama, Takashi, **297**, 664
- Uchiyama, Yasuo, **294**, 254
- Uckun, Fatih M., **292**, 987
- Udar, Nitin, **295**, 668
- Uddin, M., **293**, 412
- Uddin, Shahab, **291**, 744; **297**, 760
- Udho, Eshwar, **297**, 463
- Ueda, Hiroko, **293**, 307
- Ueda, Hiroshi, **295**, 236
- Ueda, Junji, **292**, 474
- Ueda, Kazumitsu, **296**, 625
- Ueda, Kazuo, **291**, 385
- Ueda, Tadashi, **299**, 42
- Ueda, Yoko, **297**, 138
- Uedelhoven, J., **296**, 319
- Uehara, Masami, **292**, 776
- Uehara, Yoshinari, **296**, 1051
- Uekawa, Natsuko, **295**, 187
- Ueki, Noboru, **297**, 1128
- Uemura, Arata, **297**, 997
- Uemura, Sotaro, **293**, 1550
- Uemura, Takeshi, **296**, 492
- Ueno, Eriko, **297**, 96
- Ueno, Takamasa, **295**, 348
- Ueno, Takashi, **292**, 256; **296**, 1164
- Ueno, Yasuharu, **293**, 1420
- Ueshima, Shigeru, **295**, 428
- Ueyama, Hisao, **294**, 205
- Ueyama, Takehiko, **298**, 738
- Ui, Michio, **290**, 140
- Ukaji, Koutarou, **292**, 153
- Ukena, Kazuyoshi, **291**, 1187
- Ulens, Chris, **299**, 562
- Ullah, Abul H.J., **290**, 1343; **297**, 1016
- Ulrich, A., **295**, 695
- Ulmer, Artur J., **295**, 553
- Umenishi, Fuminori, **292**, 771; **293**, 913
- Umetani, Michihisa, **293**, 542
- Umetsu, Kazuo, **295**, 207
- Umezawa, Akihiro, **293**, 61
- Umitsuki, Genryou, **295**, 92
- Underdown, Brian J., **295**, 394
- Unger, E., **293**, 602
- Unger, Roger H., **297**, 1259
- Unger, Thomas F., **299**, 659
- Uno, Yumiko, **296**, 553
- Upadhayaya, Kailash, **290**, 770
- Upholt, William B., **290**, 955
- Ura, Kiyoe, **290**, 16
- Uramoto, Hidetaka, **295**, 945
- Urano, Fumihiko, **293**, 61
- Urano, Tomohiko, **299**, 222
- Urano, Y., **297**, 722
- Urao, Takeshi, **293**, 806
- Urata, Masaaki, **296**, 233
- Urata, Yoshishige, **296**, 32
- Urizar, E., **299**, 891
- Urrabaz, Rheanna, **298**, 537
- Urushihara, M., **299**, 555
- Usami, Ihomi, **298**, 178
- Usami, Osamu, **297**, 625
- Ushigome, Hidetaka, **297**, 433
- Ussat, Sandra, **294**, 672; **297**, 1186
- Usson, Yves, **290**, 97
- Usta, Mustafa F., **298**, 427
- Uthman, Aumaid, **299**, 688
- Utsunomiya, Hirotoshi, **294**, 1023
- Uyama, Eiichiro, **290**, 1042
- Uyeda, Taro Q.P., **299**, 825
- Väänänen, H. Kalervo, **292**, 128; **293**, 1060
- Vaandrager, Arie B., **290**, 532
- Vaccaro, Maria I., **290**, 641
- Vachier, I., **290**, 219
- Vacquier, Victor D., **296**, 833; **298**, 403
- Vähäkangas, Kirsi, **293**, 850
- Valdés, Raquel, **296**, 575
- Valenzuela Silva, Carmen, **292**, 538
- Valeri, Maurizio, **299**, 273
- Valette, Annie, **294**, 504
- Valtorta, Flavia, **291**, 972
- Van Acker, Kristel, **294**, 249
- Van Aken, Hugo, **295**, 975; **296**, 134; **299**, 479
- van Amersfoort, Shirley C.M., **292**, 71
- van Baren, Marijke J., **292**, 58
- Van Beeumen, J., **296**, 161
- van Berkel, Theo J.C., **293**, 1279
- van Besien, Koen, **297**, 760
- Vance, Dennis E., **292**, 1117, 1273
- Vandecasteele, S.J., **291**, 528
- van den Berg, Carmen W., **293**, 714; **298**, 638
- Vandenbergh, I., **296**, 161
- Vanden Broeck, Jozef, **293**, 1223
- van der Donk, Wilfred A., **295**, 952
- van der Laarse, A., **290**, 844
- van der Linde, Herma C., **292**, 58
- Van der Ploeg, L.H.T., **292**, 1075
- van der Vijgh, Wim J.F., **295**, 9
- van der Vliet, Hendrik N., 1156
- van der Wal, Allard C., **298**, 80
- Van Der Walt, Jurg, **299**, 562
- Vandier, Didier, **296**, 792
- Van Eldere, J., **291**, 528
- van Golde, Lambert M.G., **290**, 532
- Vanhaesebroeck, Bart, **296**, 178
- Vanhorenbeeck, Vinciane, **292**, 848
- Van Houtte, Freya, **297**, 486
- Vanlandschoot, Peter, **297**, 486
- Vannacci, Alfredo, **296**, 840
- Van Nieuwerburgh, Lies, **291**, 344
- Vannucchi, Simonetta, **290**, 820
- Vanoevelen, Jo, **294**, 249
- Van Petegem, F., **296**, 161
- Van Roust, M., **291**, 528
- Van Rompaey, L., **291**, 820
- van Roermund, C.W.T., **299**, 494



- Van Themsche, Céline, **297**, 765  
 van Valen, Frans, **293**, 86  
 van Wering, Herbert M., **299**, 587  
 van Zon, Arend., **291**, 585  
 Varaluksit, Tanutra, **297**, 968  
 Varas, Mariana M., **299**, 739  
 Vargas, Leonardo, **299**, 510  
 Vargas-Arispuro, Irasema, **290**, 577; **295**, 98  
 Vargiu, Cristina, **290**, 463  
 Varlakhanova, Natalia V., **298**, 37  
 Varma, Balwantkumar R., **296**, 451  
 Varoqui, Hélène, **290**, 903  
 Vassart, G., **299**, 891  
 Vassilev, Alexei O., **292**, 987  
 Vatanaviboon, Paiboon, **297**, 968  
 Vathsala, P.G., **292**, 312  
 Vattanaviboon, Paiboon, **299**, 177  
 Vaughan, Douglas E., **297**, 1112  
 Vaysse, Jenny, **296**, 507  
 Vaysse, Laurence, **290**, 1489  
 Vayssière, Béatrice, **298**, 185  
 Vayssière, Jean-Luc, **298**, 282  
 Vaz, Winchil L.C., **296**, 596  
 Vazquez-Duhalt, Rafael, **295**, 828  
 Vecchio, Giancarlo, **294**, 813  
 Veenstra, Timothy D., **290**, 885; **292**, 587  
 Vekris, Antoine, **296**, 1000  
 Veneault, C., **297**, 1197  
 Venkataraman, Ganesh, **290**, 1206, 1214  
 Venkatesh, Deepak A., **297**, 934  
 Venot, Nicole, **298**, 193  
 Ventura, A.M., **296**, 897  
 Ventura, José Luis, **293**, 1028  
 Ventura-Clapier, Renée, **294**, 340  
 Vera, María Inés, **295**, 582  
 Verdeti, Jean, **290**, 97  
 Vereczkey, László, **291**, 29, 1089  
 Verhoeven, Guido, **295**, 469  
 Verma, Praveen, **290**, 770  
 Vernal, Javier, **293**, 633  
 Veronesi, Valentina, **296**, 685  
 Vetere, Amedeo, **297**, 382  
 Vetter, Hans, **291**, 687  
 Vezzoli, Giuseppe, **293**, 974  
 Vial, Jean-Claude, **290**, 97  
 Viarengo, Aldo, **291**, 476  
 Vicente, João B., **294**, 82  
 Vidal-Puig, Antonio, **294**, 324  
 Videbæk, Nicoline, **295**, 243  
 Viegas, Cristina A., **292**, 741  
 Vieira, Danielle P., **293**, 1358  
 Vieira, Rafael P., **296**, 241  
 Vier, Julianne, **290**, 359  
 Viereck, Volker, **291**, 680  
 Vigh, László, **290**, 1535  
 Viglietta, Céline, **290**, 53  
 Vigneault, Normand, **291**, 261  
 Vihko, Pirkko, **292**, 128  
 Vijayagopal, Parakat, **293**, 847  
 Viklund, Leif, **290**, 146  
 Vilela-Silva, Ana-Cristina E.S., **298**, 403  
 Villalba, José M., **297**, 581  
 Villalta, Fernando, **290**, 29  
 Villard, Pierre-Henri, **297**, 249  
 Villasmil, Rafael, **293**, 349  
 Vincent, Jean-Pierre, **298**, 760  
 Vincent, Karen A., **291**, 908  
 Vincent, Timothy S., **291**, 91  
 Vincenzoni, Federica, **294**, 829  
 Visca, Paolo, **294**, 1064  
 Vischer, Peter, **293**, 86  
 Visigalli, Massimo, **293**, 100  
 Visser, W.F., **299**, 494  
 Visvikis, Sophie, **292**, 83  
 Vittitow, Jason L., **298**, 67  
 Vivekananda, Jeeva, **292**, 41  
 Vives-Bauza, Cristofol, **290**, 1593  
 Vlattas, Angela, **294**, 655  
 Vocke, Sebastian, **296**, 134  
 Voeller, Donna M., **297**, 24  
 Vogel, C., **293**, 816  
 Vogel, H.J., **299**, 634  
 Vogel, Lotte K., **299**, 35  
 Vogel, Walther, **294**, 496; **299**, 787  
 Voigt, M., **295**, 336  
 Voigt, Mark M., **295**, 849  
 Voit, Thomas, **291**, 1283  
 Vojtěchová, Martina, **290**, 790  
 Vollmar, Angelika M., **295**, 1068  
 von Dehn, Gerlinde, **296**, 1051  
 von Eckaralstein, Arnold, **291**, 598  
 von Eckardstein, Arnold, **291**, 598; **296**, 1051  
 von Kegler, Stefan, **295**, 975  
 von Mach, M.A., **294**, 1052  
 Voznesensky, Maria, **297**, 46  
 Vreman, Hendrik J., **290**, 1539  
 Vrhovsek, Urska, **296**, 631  
 Vunjak-Novakovic, G., **294**, 149  
  
 Waard, Michel de, **291**, 640  
 Wachi, Masaaki, **290**, 268; **292**, 94; **295**, 92  
 Wada, Akimori, **294**, 205  
 Wada, Etsuko, **290**, 1282  
 Wada, Ikuo, **290**, 878  
 Wada, Keiji, **290**, 1282  
 Wada, Manabu, **292**, 362  
 Wada, Masahiro, **297**, 323  
 Wada, Yoshinao, **297**, 353  
 Wada, Youichiro, **290**, 858  
 Wade, Susan M., **293**, 1233  
 Wadhwa, Sunil, **297**, 46  
 Waeber, Gérard, **295**, 174  
 Waga, Kazuo, **299**, 116  
 Wagner, H., **295**, 695  
 Wagner, Helga, **298**, 163  
 Wagner, Sandra, **292**, 937  
 Waguri, Nobuo, **291**, 210  
 Waguri, Satoshi, **294**, 254  
 Waheed, Syed Mohsin, 1058  
 Wahren, John, **295**, 1035  
 Wakabayashi, Keiji, **296**, 20  
 Wakagi, Takayoshi, **293**, 489  
 Wakamatsu, Toshifumi, **296**, 1097  
 Wakasugi, Masaki, **294**, 254  
 Wakaumi, Michi, **298**, 41  
 Wakim, Bassam, **296**, 1171  
 Wakino, Shu, **297**, 794  
 Waldrop, Grover L., **291**, 1213  
 Waldum, Helge L., **297**, 335  
 Walev, Ivan, **297**, 545  
 Walker, Nancy, **294**, 854  
 Walker, Winsome F., **293**, 521  
 Wallace, Deborah M.E., **292**, 909; **299**, 770  
 Wallace, John C., **295**, 387  
 Wallasch, C., **295**, 695  
 Wallenius, Kristina, **293**, 560  
 Wallenius, Ville, **293**, 560  
 Waller, Jörg Stefan, **298**, 657  
 Walsh, Gerald M., **291**, 433  
 Walther, Thomas, **290**, 1072  
 Walts, Avram D., **295**, 276  
 Walz, Wolfgang, **298**, 531  
 Wan, Dafang, **297**, 528  
 Wan, Tao, **297**, 1033  
 Wanders, Ronald J.A., **290**, 629; **292**, 109; **293**, 269; **299**, 494  
 Wang, Bao-Wei, **291**, 185; **296**, 710  
 Wang, C., **293**, 167  
 Wang, Changsen, **296**, 388  
 Wang, Chiang, **295**, 129, 136; **296**, 281  
 Wang, Chih-Hung, **298**, 805  
 Wang, Chunli, **290**, 1411  
 Wang, Dakun, **294**, 700  
 Wang, De-Shou, **297**, 632  
 Wang, Er-jia, **297**, 412  
 Wang, Feng, **295**, 657  
 Wang, Gang, **291**, 795  
 Wang, Guotang, **292**, 980  
 Wang, Haitao, **298**, 552  
 Wang, Hangyan, **290**, 1411  
 Wang, Heuy-Ching, **294**, 626  
 Wang, Hong, **299**, 703  
 Wang, Hsing-Won, **298**, 805  
 Wang, Hui, **297**, 83  
 Wang, Jinfeng, **291**, 1276  
 Wang, Jin-Hee, **296**, 1157  
 Wang, Jin-Hui, **290**, 1454  
 Wang, Jishi, **296**, 1077  
 Wang, Ju, **290**, 81  
 Wang, Juan, **299**, 880  
 Wang, Jun, **291**, 605  
 Wang, K., **297**, 876  
 Wang, Le, **292**, 969  
 Wang, Lili, **298**, 420  
 Wang, Lin, **293**, 1426  
 Wang, Liya, **298**, 552  
 Wang, Ming-Tao, **294**, 621  
 Wang, Myeong-H., **297**, 10  
 Wang, Peng George, **295**, 1  
 Wang, Ping, **293**, 640; **294**, 448  
 Wang, Qian, **299**, 569, 744  
 Wang, Q. May, **292**, 601  
 Wang, Quing-Ping, **290**, 1237  
 Wang, R.M., **295**, 475  
 Wang, Rui, **296**, 463; **297**, 729  
 Wang, Shimin, **295**, 223  
 Wang, Shu, **291**, 414  
 Wang, Timothy C., **293**, 366; **297**, 1089  
 Wang, Ting, **296**, 201  
 Wang, Ting-Fang, **296**, 949  
 Wang, Wei, **294**, 835  
 Wang, Wei-Ning, **297**, 653  
 Wang, Wen-Ching, **297**, 282  
 Wang, Xiao-ping, **292**, 1111  
 Wang, Xin, **295**, 300  
 Wang, Xing, **292**, 236  
 Wang, Xingyu, **296**, 742  
 Wang, Xinkang, **299**, 14  
 Wang, Xue-Qing, **290**, 891; **294**, 660  
 Wang, Yan, **290**, 914  
 Wang, Yanqing, **292**, 121  
 Wang, Yibin, **299**, 14  
 Wang, Yi-liang, **299**, 74  
 Wang, Ying, **292**, 396; **297**, 148  
 Wang, Yingxiao, **292**, 892  
 Wang, Yinsheng, **291**, 1252  
 Wang, Yi-Qun, **295**, 182  
 Wang, You-jie, **296**, 214  
 Wang, Young-Pil, **296**, 1295  
 Wang, Yu, **293**, 1161  
 Wang, Yuequn, **295**, 862; **296**, 206; **299**, 542, 606  
 Wang, Yun, **293**, 777; **296**, 742  
 Wang, Z.L., **295**, 475  
 Wang, Zhixin, **291**, 1276  
 Wang, Zhi-Xin, **297**, 653  
 Wang, Zhong, **295**, 1014  
 Wang, Zhongmin, **291**, 813  
 Wara-aswapati, Nawarat, **294**, 854  
 Ward, Donald T., **297**, 71  
 Wardell, Mark, **291**, 813  
 Waring, James, **295**, 289  
 Warner, Kristy A., **293**, 509  
 WarriLOW, Andrew G.S., **299**, 189  
 Washburn, Michael P., **291**, 550  
 Washida, Miwa, **297**, 1058  
 Wasserfallen, Alain, **294**, 82  
 Watanabe, Emi, **298**, 235  
 Watanabe, Go, **293**, 1420  
 Watanabe, Hideki, **295**, 31  
 Watanabe, Hiroshi, **296**, 62  
 Watanabe, Hisako, **292**, 88  
 Watanabe, Hisayoshi, **293**, 150  
 Watanabe, Junko, **297**, 329  
 Watanabe, Keiko, **294**, 906  
 Watanabe, Ken-ichi, **290**, 121; **295**, 501  
 Watanabe, Kikuko, **291**, 884  
 Watanabe, Masahiko, **296**, 20  
 Watanabe, Masami, **294**, 261  
 Watanabe, Masanao, **293**, 542  
 Watanabe, Miki, **299**, 169  
 Watanabe, Mitsunori, **292**, 571  
 Watanabe, Naohide, **290**, 1275  
 Watanabe, Naoko, **291**, 838  
 Watanabe, Nobuyuki, **294**, 1121  
 Watanabe, Sanae, **290**, 1255  
 Watanabe, Shinya, **293**, 470  
 Watanabe, Tadashi, **294**, 692  
 Watanabe, Takafumi, **299**, 49  
 Watanabe, Takashi, **297**, 918  
 Watanabe, Takeshi, **292**, 121  
 Watanabe, Takumi, **291**, 623  
 Watanabe, Takuya, **293**, 396

- Watanabe, Tomoyuki, **294**, 779  
Watanabe, Toshiaki, **292**, 347  
Watanabe, Toshihiro, **292**, 434  
Watanabe, Yasuyoshi, **292**, 133  
Watanabe, Yoshiyasu, **297**, 1135  
Watanabe, Yumiko, **292**, 133  
Watanabe, Yusuke, **297**, 255  
Watanabe, Tadashi, **294**, 692  
Waterfall, Christy M., **299**, 715  
Waterham, H.R., **299**, 494  
Waterman, Elizabeth A., **298**, 169  
Waters, D.J., **292**, 886  
Wątopek, Wiesław, **293**, 213  
Watson, Harold, **292**, 601  
Watson, Philip F., **298**, 169  
Watt, P.M., **294**, 23  
Wattiaux, Robert, **296**, 1180  
Wattiaux-De Coninck, Simone, **296**, 1180  
Wätzig, Kristin, **298**, 5  
Waugh, David S., **294**, 949  
Wazawa, Tetsuichi, **290**, 311  
Webb, R. Clinton, **298**, 427  
Weber, Christian, **290**, 988  
Weber, Günther, **297**, 492  
Weber, Hans-Jorg, **297**, 232  
Weber, Karl T., **296**, 451  
Weber, Nina C., **295**, 1068  
Weber, Thomas Peter, **295**, 975; **299**, 479  
Weetman, Anthony P., **298**, 169  
Wegrowski, Yanusz, **295**, 737  
Węgrzyn, Grzegorz, **292**, 333  
Wehlin, Lena, **296**, 255  
Wei, Gang, **296**, 1245  
Wei, H., **297**, 890  
Wei, Haiming, **298**, 297  
Wei, Jian-wen, **299**, 74  
Wei, Lin, **297**, 528  
Wei, Lixin, **298**, 552  
Wei, Ping, **293**, 478  
Wei, Zhun, **293**, 1396  
Weichel, Oksana, **297**, 545  
Weigel, Janet A., **294**, 918; **297**, 980  
Weigel, Paul H., **294**, 918; **297**, 980  
Weigert, Cora, **290**, 85  
Weinberg, David, **292**, 1075  
Weinrich, Scott L., **298**, 144  
Weinschenk, Toni, **298**, 520  
Weinshilboum, Richard M., **292**, 402  
Weisz, Alessandro, **296**, 976  
Weitzdoerfer, Rachel, **293**, 836  
Wellington, Cheryl, **290**, 713  
Wells, William W., **291**, 550  
Wels, Winfried, **297**, 1121  
Wendholt, Doreen, **295**, 678  
Wenthold, Robert J., **291**, 85  
Wenzel, Jürgen J., **295**, 408  
Wenzel-Seifert, Katharina, **298**, 824  
Werner, Ulf-Eike, **297**, 1186; **294**, 672  
Werz, Oliver, **290**, 185; **295**, 985  
Wesseling, John G., **295**, 1156  
West, Duncan J., **294**, 402  
West, Jennifer L., **291**, 1014  
Westerlund-Karlsson, Annette, **296**, 1072  
Westermarck, B., **290**, 349  
Westling, Jennifer, **293**, 501  
Westphal, Martin, **295**, 975; **296**, 134; **299**, 479  
Westwater, Caroline, **290**, 1030  
Whang, Edward E., **293**, 391  
Whangsuk, Wirongrong, **299**, 177  
Wharton, Robin P., **297**, 1085  
Wheeler, James A., **294**, 329  
Wheeler-Jones, Caroline P.D., **290**, 1470; **294**, 1001  
Whitcomb, David, **293**, 1426  
White, Harold B., III, **292**, 1267  
White, Brandy J., **296**, 1069  
White, John O., **292**, 102  
White, Scott A., **290**, 806  
White, Tommi A., **294**, 798  
Whiteman, Matthew, **296**, 883  
Whitfield, G. Kerr, **299**, 730  
Whittle, Christina, **298**, 371  
Wiche, Gerhard, **296**, 904  
Wick, Michael J., **294**, 136  
Wickert, L., **295**, 330  
Wickham, Geoffrey, **290**, 1602  
Wickrema, Amittha, **297**, 760  
Wiedermann, Christian J., **297**, 806  
Wiemer, Erik A.C., **291**, 535  
Wijetunge, S., **290**, 1246  
Wilborn, Teresa W., **291**, 1052  
Wilchek, Meir, **290**, 775  
Wilcock, Gordon K., **291**, 501; **299**, 373  
Wilcox, Henry G., **290**, 256  
Wilder, Ronald L., **294**, 1114  
Wilkes, Denise M., **296**, 388  
Wilkinson, Brian J., **290**, 62  
Wilkinson, Miles F., **291**, 605  
Wilkison, William O., **294**, 371  
Wilkowsky, S.E., **291**, 516  
Will, Jutta, **293**, 182  
Willbold, Dieter, **292**, 734  
Wille, Sandra, **298**, 303  
Willey, James C., **293**, 509  
Williams, Alan J., **294**, 402  
Williams, David E., **292**, 558  
Williams, Gareth, **296**, 458  
Williams, Noreen, **290**, 569  
Williams, R.J.P., **292**, 293; **297**, 689  
Williams, Richard T., **292**, 812  
Williams, Sylvain, **290**, 1321  
Williamson, Michael, **299**, 628, 924  
Willnich, M., **299**, 891  
Wilmen, Andreas, **297**, 78  
Wilson, Anthony G., **298**, 169  
Wilson, B.A., **295**, 561  
Wilson, Katina M., **293**, 274  
Wilson, T. Hastings, **290**, 824  
Willson, Timothy M., **294**, 597  
Wilson, William J., **293**, 446  
Wilterding, John H., **293**, 1168  
Wiman, Björn, **299**, 25  
Winder, Neomi, **294**, 51  
Winkler, James V., **290**, 1388  
Winn, Robert K., **295**, 157  
Wirtz, Denis, **296**, 771  
Witters, Lee A., **293**, 892  
Wittkopp, Patricia J., **293**, 1262  
Wittrant, Y., **293**, 38  
Wlodawer, Alexander, **291**, 875; **294**, 184; **295**, 1020  
Wojtaszewski, Jørgen F.P., **298**, 309  
Wolf, Richard E., Jr., **290**, 397; **291**, 979; **292**, 292  
Wolfe, Darren, **291**, 855  
Wolff, Charles-Michel, **291**, 764  
Wolgemuth, Debra J., **290**, 730  
Wollweber, L., **293**, 602  
Wolvetang, E. J., **291**, 191  
Won, Jonghwa, **296**, 1295  
Won, Joo Yun, **293**, 1248  
Won, Misun, **290**, 613  
Wong, Alice, **298**, 750  
Wong, Elaine Y.M., **296**, 1104  
Wong, Hector R., **291**, 453; **297**, 1264  
Wong, Jean S., **293**, 549  
Wong, Kelli, **295**, 107  
Wong, Kit, **290**, 737  
Wong, P.W., **293**, 356  
Wong, W.S. Fred, **293**, 72  
Woo, Chang-Hoon, **298**, 392  
Woo, Eun-Rhan, **293**, 231; **295**, 591; **297**, 885  
Woo, Je-Tae, **292**, 94  
Woo Rue, Seok, **295**, 283  
Woo, Seung Kyoan, **294**, 968  
Woodman, Zenda L., **297**, 1225  
Woods, Danielle D., **293**, 1233  
Woolcock, Caron M., 364  
Woollard, Kevin J., **294**, 1161  
Worman, Howard J., **293**, 1217  
Worthy, Karen M., **296**, 1228  
Wray, Curtis J., **296**, 41  
Wray, Curtis, **290**, 1  
Wray, Dennis, **297**, 10  
Wright, Michael J., **297**, 600  
Wright, Michel, **298**, 720  
Wright, Samuel D., **294**, 88  
Wrzosek, Carol, **295**, 435  
Wu, Aiguo, **293**, 349; **299**, 910  
Wu, Chi-Yu, **291**, 165  
Wu, Da-Zheng, **293**, 979  
Wu, Ding Wen, **292**, 593  
Wu, Gaoyao, **290**, 47  
Wu, Guan, **294**, 700  
Wu, Hsung-Chi, **291**, 338  
Wu, Jiaxi, **295**, 435  
Wu, Jing, **290**, 914; **297**, 523  
Wu, Joseph M., **297**, 1311  
Wu, Jun, **295**, 1102; **297**, 185  
Wu, Tony-Lin, **299**, 196  
Wu, Wen-yan, **299**, 74  
Wu, Xiang-Fu, **293**, 675  
Wu, Xiao-kun, **299**, 74  
Wu, Xiushan, **295**, 862; **296**, 206; **299**, 542, 606  
Wu, Ying-Chung, **292**, 789  
Wulfänger, Jens, **295**, 423  
Wuytack, Frank, **294**, 249  
Wyde, Philip R., **294**, 626  
Xi, XuGuang, **298**, 789  
Xia, Chun-Gu, **295**, 182  
Xia, Song, **298**, 505  
Xia, Yi-Feng, **296**, 406  
Xiang, Jim, **290**, 66  
Xiang, Shuang-Lin, **299**, 697  
Xiao, Junhua, **291**, 101  
Xiao, Zhou-Sheng, **297**, 38  
Xie, Lili, **295**, 952  
Xie, Wen, **294**, 384  
Xie, Xiao-jin, **299**, 74  
Xie, Yi, **291**, 414  
Xie, Yihu, **297**, 528  
Xie, Yue, **291**, 1071  
Xin, Jia-Ying, **295**, 182  
Xing, Jun, **297**, 267  
Xing, Nianzeng, **297**, 645  
Xing, Sixun, **293**, 23  
Xing, Weirong, **295**, 1096  
Xing, Xiaoyun, **297**, 116  
Xiong, Changyun, **292**, 1036  
Xu, Aimin, **293**, 1161  
Xu, An-long, **299**, 74  
Xu, B., **290**, 318  
Xu, C., **290**, 318  
Xu, Chunhe, **293**, 593  
Xu, Dong, **294**, 245  
Xu, Guofeng, **297**, 510  
Xu, Guoxiong, **294**, 1079  
Xu, Hai-Ming, **290**, 1079  
Xu, Hong, **297**, 510  
Xu, Jianguo, **297**, 565  
Xu, Jia-Sen, **292**, 564  
Xu, Jing, **293**, 647  
Xu, Jiping, **292**, 456  
Xu, Kai Y., **291**, 111; **294**, 1030  
Xu, Lance Yi, **293**, 1161  
Xu, Lin, **299**, 14  
Xu, Min, **291**, 101  
Xu, Ming, **297**, 537  
Xu, Ming-jiang, **293**, 1037  
Xu, Ning, **292**, 944  
Xu, Qiang, **290**, 1128  
Xu, Ren, **293**, 979  
Xu, Sujuan, **297**, 1008  
Xu, Wenlin, **290**, 1411  
Xu, Xiao Zhou, **290**, 225  
Xu, Yingwu, **299**, 216  
Xu, YueFang, **293**, 1191  
Xu, Zheng-ping, **294**, 287  
Xu, Zhikai, **298**, 552  
Xu, Qunyuan, **294**, 726  
Xue, Yaming, **292**, 184  
Xun, Luying, **294**, 76  
Yabe, Hiroki, **293**, 61  
Yabuuchi, Hikaru, **299**, 410  
Yagasaki, Kazumi, **299**, 693  
Yagasaki, Yuki, **291**, 838  
Yagi, Hirofumi, **299**, 455  
Yagi, Kunio, **291**, 861



- Yagita, Hideo, **296**, 328; **299**, 488  
Yajima, Yukio, **295**, 376  
Yakehiro, Masuhide, **295**, 452  
Yakovlev, Alexander G., **290**, 796; **291**, 191; **299**, 201  
Yalon-Hacohen, Michal, **296**, 93  
Yamabayashi, Taka-aki, **292**, 513  
Yamada, Akira, **292**, 781  
Yamada, Asako, **299**, 395  
Yamada, Hidenori, **294**, 1040  
Yamada, Hiroshi, **294**, 261  
Yamada, Junji, **299**, 49  
Yamada, Katsushi, **291**, 806  
Yamada, Kazuhira, **294**, 734  
Yamada, Kazuya, **293**, 1007; **297**, 368  
Yamada, Kenneth M., **295**, 898  
Yamada, Koji, **295**, 547; **297**, 193  
Yamada, Kouji, **291**, 245; **294**, 456  
Yamada, Masao, **291**, 484; **293**, 1254  
Yamada, Masashi, **294**, 1087  
Yamada, Michiyuki, **290**, 979  
Yamada, Munee, **296**, 1215  
Yamada, Nobuhiro, **299**, 291  
Yamada, Takao, **293**, 396  
Yamada, Takeshi, **297**, 143  
Yamada, Taketo, **292**, 138; **298**, 731  
Yamada, Tomoko, **290**, 415  
Yamada, Yasuaki, **296**, 1251  
Yamada, Yoichi, **294**, 199  
Yamada, Yoshihiro, **293**, 1124  
Yamada, Yoshiji, **290**, 1199  
Yamade, Shinichi, **294**, 205  
Yamagami, Setsu, **294**, 1071  
Yamagishi, Masako, **295**, 255; **298**, 785  
Yamagishi, Sho-ichi, **290**, 973; **296**, 877; **297**, 419; **299**, 183  
Yamaguchi, Hideki, **297**, 214  
Yamaguchi, Hisateru, **290**, 722  
Yamaguchi, Isamu, **290**, 421  
Yamaguchi, Isomaro, **293**, 489  
Yamaguchi, Sachiko, **291**, 554  
Yamaguchi, Shigeki, **296**, 497  
Yamaguchi, Takamasa, **290**, 1382  
Yamaguchi, Takashi, **292**, 138  
Yamaguchi, Tokio, **293**, 517  
Yamaguchi, Toru, **299**, 532  
Yamaguchi-Shinozaki, Kazuko, **290**, 998; **293**, 806  
Yamahara, Kaori, **291**, 623  
Yamaji, Satoshi, **297**, 1324  
Yamakage, Michiaki, **294**, 199  
Yamakawa, Kasumi, **292**, 492  
Yamakawa, Kazuhiro, **291**, 1134  
Yamakuni, Tooru, **293**, 962; **298**, 793  
Yamamori, Hidenaga, **296**, 313  
Yamamori, Tooru, **293**, 1571  
Yamamoto, Hideko, **298**, 793  
Yamamoto, Hiroshi, **290**, 973  
Yamamoto, Hisashi, **298**, 41  
Yamamoto, Isamu, **298**, 433  
Yamamoto, Ken-ichi, **299**, 697  
Yamamoto, Koh, **297**, 1245  
Yamamoto, Masahiro, **292**, 280  
Yamamoto, Masaki, **290**, 421  
Yamamoto, Naoki, **297**, 17  
Yamamoto, Naoko, **292**, 776  
Yamamoto, Satoshi, **294**, 42; **295**, 376  
Yamamoto, Takashi, **294**, 695  
Yamamoto, Takahiro, **297**, 32  
Yamamoto, Takeshi, **291**, 1102  
Yamamoto, Tetsuya, **297**, 811  
Yamamoto, Tokuo T., **293**, 1007  
Yamamoto, Toshifumi, **298**, 793  
Yamamoto, Toshinori, **290**, 482  
Yamamura, Hirohei, **290**, 225; **297**, 664  
Yamamura, Shohei, **294**, 1138  
Yamanaka, Akihiro, **290**, 1237  
Yamanaka, Kazuya, **298**, 632  
Yamanaka, Shiho, **292**, 268  
Yamanaka, Takayuki, **294**, 521, 528  
Yamanaka, Takenari, **297**, 59  
Yamanaka, Yuko, **298**, 632  
Yamano, Shuji, **290**, 1349  
Yamano, Yoshiaki, **292**, 362  
Yamanouchi, Keitaro, **292**, 709  
Yamaoka, Junichi, **291**, 780  
Yamaoka, Kaoru, **295**, 452  
Yamaoka, Kumiko, **290**, 162  
Yamaoka, Masayuki, **293**, 517  
Yamaoka, Takashi, **292**, 138; **293**, 247; **296**, 1039  
Yamasaki, H., **294**, 108  
Yamasaki, Hisashi, **290**, 1483  
Yamasaki, Reishi, **296**, 1251  
Yamasaki, Satoshi, **296**, 26  
Yamashina, Shohei, **294**, 441  
Yamashiro, Hiromichi, **299**, 148  
Yamashiro, Kyoko, **290**, 1478  
Yamashita, Kamejiro, **297**, 1291  
Yamashita, Kyoko, **296**, 201  
Yamashita, Mayumi, **294**, 414  
Yamashita, Megumi, **299**, 498  
Yamashita, Satoshi, **290**, 1042  
Yamashita, Shizuya, **290**, 713; **292**, 781; **296**, 625  
Yamashita, Shunichi, **290**, 1354; **291**, 130  
Yamashita, Toshihide, **295**, 463  
Yamashita, Yoshinori, **298**, 144  
Yamashita, Yuichi, **290**, 1551  
Yamauchi, Junji, **296**, 85  
Yamauchi, Mika, **299**, 532  
Yamauchi, Takashi, **290**, 948  
Yamauchi, Yasushi, **290**, 1551  
Yamauchi, Yohei, **298**, 357  
Yamaura, Junji, **295**, 255; **298**, 785  
Yamazaki, Harumi, **292**, 256  
Yamazaki, Kazuto, **290**, 1114; **298**, 779  
Yamazaki, Ken, **294**, 456  
Yamazaki, Kentaro, **297**, 341  
Yamazaki, Masashi, **295**, 501  
Yamazaki, Takeshi, **296**, 1207  
Yamazaki, Tsutomu, **298**, 493  
Yan, Bo, **291**, 582  
Yan, Jun, **299**, 886  
Yan, Wei, **293**, 932  
Yan, Yuhua, **293**, 50  
Yanagida, Toshio, **290**, 311  
Yanagisawa, Ken, **299**, 18  
Yanagisawa, Shuichi, **298**, 156  
Yanagisawa, Yoshiko, **295**, 207  
Yanagita, Manabu, **297**, 329  
Yanago, Eiko, **293**, 225  
Yanaka, Ichiro, **294**, 470  
Yanase, Haruko, **296**, 145  
Yanase, Mikio, **290**, 898; **297**, 1108  
Yang, Cuihong, **297**, 510  
Yang, Hankwang, **292**, 715  
Yang, Hui, **294**, 726  
Yang, J., **293**, 167  
Yang, Jaw-Ji, **297**, 105  
Yang, Jeong-Yeh, **290**, 1090  
Yang, Jianhui, **299**, 285  
Yang, Jin-Ming, **293**, 1073  
Yang, Liming, **291**, 68  
Yang, Nuo, **292**, 860  
Yang, Qifeng, **290**, 1483  
Yang, Quan-en, **296**, 1228  
Yang, Soon Ae, **298**, 687  
Yang, Sung-Tae, **290**, 558; **296**, 1044  
Yang, Sung Y., **298**, 251  
Yang, Tian, **299**, 886  
Yang, Wen-li, **299**, 74  
Yang, Xuebin, **292**, 144; **299**, 208  
Yang, Xuhao, **290**, 42  
Yang, Yang, **293**, 675  
Yang, Yoolhee, **298**, 289  
Yang, Yuh-Cheng, **299**, 241  
Yang, Yuh-Shyong, **297**, 1027  
Yang, Yumei, **293**, 1191  
Yang, Zhao-Hui, **290**, 1255  
Yang, Zhiyong, **294**, 854  
Yanjuan, Zhu, **294**, 231  
Yano, Aiko, **297**, 1297  
Yano, Junichi, **296**, 544  
Yano, Makiko, **292**, 138  
Yano, Tetsu, **292**, 456  
Yao, Gang, **297**, 510  
Yao, Gengdong, **296**, 1013  
Yao, Kwok-Ming, **296**, 1104  
Yao, Ming-Zhong, **290**, 1454  
Yao, Shen, **290**, 249  
Yao, Weijia, **292**, 860  
Yao, Yuan-Qing, **292**, 564  
Yaoi, Takeshi, **297**, 433  
Yaoita, Yoshio, **291**, 79  
Yasar, Umit, **299**, 25  
Yasoda, Akihiro, **291**, 987  
Yasuda, Kazuki, **291**, 17  
Yasuda, Kazuto, **295**, 207  
Yasuda, Kei, **293**, 344; **299**, 389  
Yasuda, Nobuyuki, **298**, 779  
Yasuda, Tadashi, **299**, 91  
Yasuda, Yuka, **296**, 313  
Yasue, Akihiro, **293**, 247  
Yasugi, Toshiharu, **296**, 102  
Yasui, Kozo, **293**, 1314  
Yasui, Toshiyuki, **290**, 1349  
Yasumasu, Ikuo, **294**, 456  
Yasunami, Michio, **291**, 385  
Yasunami, Yoko, **296**, 182  
Yasuoka, Chie, **296**, 32; **297**, 353  
Yatani, Hirofumi, **295**, 445  
Yatera, Misako, **296**, 313  
Yates, Christopher J.D., **295**, 616  
Yatomi, Yutaka, **299**, 483  
Yau, Peter M., **296**, 477; **297**, 1318  
Yazawa, Ikuru, **294**, 429  
Yazawa, Takashi, **297**, 368  
Ye, Jin, **290**, 488  
Ye, Lan-ting, **299**, 74  
Ye, Qing, **292**, 944  
Ye, Xiaoqin, **293**, 549  
Ye, X.Y., **290**, 813; **293**, 857  
Yeh, Che-Chung, **292**, 482  
Yeh, Hung-I, **299**, 241  
Yeh, Yao-Tsung, **296**, 1019  
Yelick, Pamela C., **293**, 1556  
Yelin, Rodrigo, **294**, 1169  
Yeow, K., **293**, 112  
Yeung, William S.B., **292**, 564; **296**, 1104  
Yi, Ho Keun, **294**, 480  
Yi, Zhengfang, **296**, 206  
Yik, Jasper H.N., **297**, 980  
Yim, Man-Bin, **290**, 1506  
Yin, Ming-biao, **295**, 435  
Yin, Yanzhi, **295**, 348  
Ying, Kang, **291**, 414  
Yip, Christopher M., **298**, 744  
Ylera, Francisco, **290**, 1583  
Yocum, D., **297**, 890  
Yoda, Koji, **296**, 305  
Yodoi, Junji, **295**, 663  
Yohda, Masafumi, **291**, 769  
Yokogawa, Takashi, **297**, 950  
Yokoi, Fumiaki, **294**, 906  
Yokoi, Tsuyoshi, **293**, 969  
Yokosawa, Hideyoshi, **293**, 986; **296**, 813  
Yokota, Hiroshi, **290**, 756  
Yokota, Jun, **292**, 609  
Yokota, Shin'ichiro, **294**, 456  
Yokota, Toshifumi, **293**, 1265  
Yokote, Koutaro, **294**, 231  
Yokoyama, Keiichi, **299**, 825  
Yokoyama, Kenji, **294**, 1138  
Yokoyama, Mitsuhiro, **293**, 421  
Yokoyama, Teruyoshi, **292**, 190  
Yoneda, Yoshihiro, **294**, 770  
Yoneda, Yukio, **292**, 200; **293**, 1445; **294**, 1177; **297**, 452  
Yonetani, Motokuni, **291**, 484  
Yoneyama, Hiroshi, **292**, 513  
Yoneyama, Hiroyuki, **298**, 675  
Yoo, Eung Jae, **295**, 970  
Yoo, Hyeon G., **298**, 251  
Yoo, Jin-Cheol, **295**, 832  
Yoo, Ji Young, **296**, 1152  
Yoo, Nam Jin, **299**, 652  
Yoon, Christina, **298**, 545  
Yoon, Jeong Hyeok, **296**, 434  
Yoon, Moon-Young, **293**, 433  
Yoon, Seog-Beom, **298**, 392  
Yoon, Suk Kwon, **290**, 585  
Yoon, Tae-Yeol, **293**, 433  
Yoshida, Haruhiko, **291**, 868



- Yoshida, Hidemi, **292**, 274  
 Yoshida, Hideo, **292**, 957  
 Yoshida, Koichi, **293**, 61  
 Yoshida, L.S., **296**, 1322  
 Yoshida, Madoka, **299**, 252  
 Yoshida, Masahiro, **297**, 375; **298**, 632  
 Yoshida, Masami, **292**, 355  
 Yoshida, Masasuke, **296**, 8  
 Yoshida, Michiteru, **292**, 268  
 Yoshida, Ning Lu, **293**, 1254  
 Yoshida, Satoshi, **294**, 687  
 Yoshida, Shinichi, **294**, 1121  
 Yoshida, Takako, **296**, 233  
 Yoshida, Takao, **291**, 769  
 Yoshida, Takumi, **291**, 787  
 Yoshida, Teruhiko, **296**, 152  
 Yoshida, Y., **294**, 615  
 Yoshida, Yasuhiro, **294**, 854  
 Yoshida, Yoichiro, **295**, 945; **299**, 42  
 Yoshida, Yoshihide, **290**, 713  
 Yoshihara, Kumiko, **292**, 689  
 Yoshikawa, Hideki, **291**, 1283; **299**, 903  
 Yoshikawa, Hiroyuki, **290**, 263; **296**, 102  
 Yoshikawa, Mutsuko, **291**, 55  
 Yoshikawa, Tetsushi, **298**, 357  
 Yoshiki, Atsushi, **290**, 1220  
 Yoshikuni, Michiyasu, **297**, 632  
 Yoshikura, Hiroshi, **290**, 1139  
 Yoshimoto, S., **295**, 630  
 Yoshimune, Kazuaki, **293**, 1389  
 Yoshimura, Akihiko, **297**, 419  
 Yoshimura, Akira, **290**, 16  
 Yoshimura, Madoka, **293**, 1265  
 Yoshimura, Mamiko, **292**, 964  
 Yoshimura, Naoko, **297**, 329  
 Yoshimura, Norio, **297**, 433  
 Yoshimura, Rikio, **297**, 433  
 Yoshimura, Tohru, **293**, 1389  
 Yoshimura, Yoshitaka, **298**, 240  
 Yoshimura, Yoshiyuki, **290**, 948  
 Yoshinaga, Keigo, **299**, 410  
 Yoshinaga, Takaharu, **299**, 389  
 Yoshinari, Kouich, **292**, 492  
 Yoshino, Haruhito, **290**, 1188  
 Yoshino, Jun, **290**, 1275  
 Yoshino, Kenji, **292**, 138  
 Yoshino, Miki, **297**, 368  
 Yoshino, Yumi, **293**, 1242  
 Yoshikawa, Ken-ichi, **292**, 268  
 Yoshizawa, Fumiaki, **298**, 235  
 Yoshizumi, Masanori, **293**, 1458; **299**, 555  
 Yosimichi, Gen, **299**, 755  
 You, Ho Jin, **294**, 753  
 You, Ji Chang, **291**, 925  
 Young, Briana M., **292**, 463  
 Young, David R., **297**, 341  
 Young, Glenn M., **292**, 463  
 Young, Tom W., **290**, 806  
 Yousfi, Malika, **297**, 641  
 Yu, Albert Cheung Hoi, **294**, 726; **296**, 657; **297**, 267  
 Yu, Dae-Yeul, **290**, 236; **296**, 1157  
 Yu, Dong, **296**, 62; **297**, 83  
 Yu, Dong-Hyun, **296**, 1125  
 Yu, Hui, **293**, 1396; **294**, 161  
 Yu, Jau-Song, **294**, 586  
 Yu, Jian, **297**, 510  
 Yu, Jianqiang, **293**, 1191  
 Yu, Jiyeon, **297**, 91  
 Yu, Long, **293**, 1191  
 Yu, Wangjie, **290**, 933  
 Yu, Xiaolin, **299**, 581  
 Yu, Yong, **293**, 593  
 Yuan, Hanna S., **299**, 613  
 Yuan, Jingzhen, **291**, 444  
 Yuan, Shyng-Shiou F., **296**, 1019  
 Yuan, Suli, **292**, 892  
 Yuan, Wuzhou, **295**, 862; **296**, 206; **299**, 542, 606  
 Yuan, Xunmei, **296**, 1372  
 Yuasa, Hiromi, **293**, 1124; **298**, 731  
 Yuasa, Katsutoshi, **293**, 1265  
 Yukawa, Masahiro, **297**, 1167  
 Yuki, Tsunetsugu, **295**, 452  
 Yuki, Richard L., **290**, 1388  
 Yulug, Isik G., **299**, 839  
 Yumoto, Eiji, **290**, 1022  
 Yun, Byung Yup, **294**, 1130  
 Yun, Chawon, **296**, 1157  
 Yun, Cheol H., **293**, 163  
 Yun, Dae-Jin, **290**, 457; **296**, 1152  
 Yun, Han Dae, **291**, 425  
 Yun, Jae-Seung, **291**, 663  
 Yun, Na-Rae, **292**, 280  
 Yung, W.K. Alfred, **292**, 422  
 Yuri, Motoko, **297**, 323  
 Yusaf, Shahnaz P., **297**, 10  
 Zabalegui, Natalia, **296**, 458  
 Zabin, Irving, **292**, 1175  
 Zablotta, Ewa, **292**, 855  
 Zacchetti, Daniele, **293**, 30  
 Zachary, Ian, **299**, 62  
 Zaczek, Robert, **299**, 744  
 Zafiroopoulos, Alexis, **298**, 574  
 Zahedi, Kamyar, **299**, 574  
 Zaher, Asgar, **294**, 238  
 Zahorchak, Robert J., **293**, 509  
 Zaidi, Neeha, **299**, 505  
 Zajac-Kaye, Maria, **297**, 24  
 Zakrzewicz, Andreas, **297**, 1270  
 Zalskaya, Irina A., **297**, 1318  
 Zalewski, Peter D., **297**, 1062  
 Zallone, Alberta, **297**, 442  
 Zambrano, Nicola, **295**, 324  
 Zanella, B., **290**, 1010  
 Zanetti, Margherita, **293**, 586  
 Zantello, Marjorie R., **291**, 313  
 Zapata-Benavides, Pablo, **295**, 784  
 Zarándi, Márta, **292**, 931  
 Zardeneta, Gustavo, **294**, 893  
 Zargarova, T.A., **292**, 799  
 Zarmi, Batia, **290**, 624  
 Zattelli, Maria C., **297**, 828  
 Zatylny, Céline, **296**, 1186  
 Zav'yalov, V.P., **292**, 799  
 Zehnder, Alexander Jakob Boris, **292**, 922  
 Zeisberg, Michael, **295**, 401  
 Zeitouni, Nawal, **290**, 1513  
 Zelante, Leopoldo, **296**, 685  
 Zeng, Shao-Qun, **291**, 1272  
 Zeng, Weiqi, **299**, 542, 606  
 Zenk, Meinhard H., **293**, 653  
 Zentella, Alejandro, **293**, 1028  
 Zerbini, L.F., **296**, 897  
 Zerkowski, H.-R., **295**, 1057  
 Zetterström, Cecilia K., **297**, 492  
 Zhan, Xi, **298**, 511  
 Zhan, Yutian, **299**, 14  
 Zhang, Ai Hua, **298**, 789  
 Zhang, Catherine W.-H., **299**, 897  
 Zhang, Chenggang, **290**, 1411  
 Zhang, Chenyang, **296**, 677  
 Zhang, Chun, **290**, 213; **297**, 1302  
 Zhang, Chun-Ting, **297**, 396  
 Zhang, Donghui, **294**, 88  
 Zhang, Dongyan, **292**, 1171  
 Zhang, Fengrui, **297**, 528  
 Zhang, Fengxue, **293**, 207  
 Zhang, Ge-Xin, **299**, 647  
 Zhang, Hong-ying, **292**, 1111  
 Zhang, Jean, **294**, 655  
 Zhang, Jia, **297**, 1033  
 Zhang, Jianbo, **295**, 1  
 Zhang, Jianghong, **293**, 1412  
 Zhang, Jianhua, **297**, 537  
 Zhang, Jie Wei, **292**, 1070  
 Zhang, Jifeng, **294**, 597; **298**, 128  
 Zhang, Jin, **292**, 1111; **296**, 178  
 Zhang, Jingsong, **296**, 1013  
 Zhang, Jinsong, **296**, 742  
 Zhang, Ji-Ping, **294**, 60; **299**, 173  
 Zhang, John H., **293**, 660  
 Zhang, Li, **292**, 441  
 Zhang, Lin, **292**, 860  
 Zhang, Liping, **290**, 602  
 Zhang, Long, **293**, 50  
 Zhang, Ming, **297**, 125  
 Zhang, Minghui, **297**, 1033  
 Zhang, Ren, **297**, 396  
 Zhang, Ruiwen, **297**, 83  
 Zhang, Shen, **290**, 1079  
 Zhang, Shengliang, **297**, 17  
 Zhang, Shi-cui, **299**, 74  
 Zhang, Wei, **291**, 101, 1038  
 Zhang, Weiping, **297**, 1033  
 Zhang, X., **290**, 526  
 Zhang, Xiaobei, **293**, 939  
 Zhang, Xiao-Yan, **297**, 625  
 Zhang, Xiao-Ying, **292**, 944  
 Zhang, Xiufang, **290**, 1128  
 Zhang, Xiu-Qin, **292**, 667; **293**, 1124  
 Zhang, Xue, **299**, 880  
 Zhang, Xueshu, **290**, 66  
 Zhang, Xuguang, **297**, 523  
 Zhang, Yanying, **290**, 1123  
 Zhang, Yinhui, **294**, 161  
 Zhang, Y.H., **297**, 302  
 Zhang, Yu, **297**, 528  
 Zhang, Yumei L., **291**, 433  
 Zhang, Yun, **294**, 726; **295**, 796  
 Zhang, Zhen, **291**, 414  
 Zhang, Zhenguo, **294**, 926  
 Zhang, Zhi-Hong, **291**, 1272  
 Zhang, Zhongjian, **295**, 877  
 Zhang, Zhongyan, **290**, 713; **296**, 625  
 Zhao, Baige, **291**, 101  
 Zhao, Bin, **297**, 1264  
 Zhao, Gang, **292**, 474  
 Zhao, Haibo, **293**, 1060  
 Zhao, Hong, **292**, 482; **294**, 464  
 Zhao, Ju, **291**, 1276; **297**, 653  
 Zhao, Luning, **298**, 128  
 Zhao, Mujun, **299**, 723  
 Zhao, Nanming, **290**, 1128  
 Zhao, Nanmingme, **209**, 1128  
 Zhao, Runxiang, **293**, 1037  
 Zhao, Shouyuan, **293**, 1191  
 Zhao, Tieming, **296**, 1171  
 Zhao, Wenfan, **298**, 60  
 Zhao, Xing, **297**, 177  
 Zhao, Yun, **294**, 319  
 Zhao, Yun-Ge, **293**, 478  
 Zhao, Zhizhuang Joe, **293**, 1037  
 Zhen, Yisong, **293**, 1396; **294**, 161  
 Zheng, Changyu, **291**, 34  
 Zheng, Donghai, **292**, 409  
 Zheng, Feng, **292**, 601  
 Zheng, Jianping, **299**, 910  
 Zheng, Yang, **293**, 201  
 Zheng, Ye, **299**, 216  
 Zheng, Yi, **297**, 653  
 Zherdev, A.V., **291**, 959  
 Zhong, Minghao, **298**, 474  
 Zhong, Qiao, **296**, 383  
 Zhou, Hualan, **299**, 910  
 Zhou, Jiliang, **296**, 1013  
 Zhou, Jiming, **293**, 274  
 Zhou, Lan, **294**, 1030; **295**, 862  
 Zhou, Liang, **296**, 206  
 Zhou, Wei, **291**, 1272  
 Zhou, Xiaoqin, **291**, 598  
 Zhou, Yaling, **290**, 830  
 Zhou, Yuan, **294**, 120  
 Zhou, Zuomin, **291**, 101  
 Zhu, Chuanbing, **295**, 862; **296**, 206; **299**, 542, 606  
 Zhu, Fu-Gang, **297**, 83  
 Zhu, Hu, **291**, 101  
 Zhu, Jieqing, **299**, 897  
 Zhu, Kejian, **297**, 1211  
 Zhu, Li-Min, **295**, 182  
 Zhu, Shi-zhen, **292**, 1111  
 Zhu, Weidong, **298**, 493  
 Zhu, Xiaojun, **294**, 597  
 Zhu, Ying, **299**, 542  
 Zhu, Yuxian, **296**, 1245  
 Zhu, Zheyang, **297**, 65  
 Zhuang, Li, **293**, 478  
 Zhuang, Lina, **299**, 465  
 Ziak, Martin, **295**, 597  
 Zidovetzki, Raphael, **296**, 806  
 Ziegelhoffer, Thomas, **290**, 1343  
 Ziegelstein, Roy C., **292**, 325  
 Zieliński, Rafał, **296**, 1310  
 Zielke, Ryszard, **292**, 333  
 Zieñ, Piotr, **296**, 1310

- Zigler, J. Samuel, **294**, 981  
Zikánová, Blanka, **294**, 962  
Zilliacus, Johanna, **295**, 749  
Zimmer, Michael, **293**, 1438  
Zimmerman, Guy A., **292**, 274  
Ziolo, Ewa, **294**, 1036  
Zipfel, Warren R., **294**, 719  
Zitzmann, Nicole, **296**, 470  
Zitzow, Lois, **291**, 692  
Ziyadeh, Fuad N., **295**, 401; **296**, 1356  
Zoghbi, Huda Y., **293**, 307  
Zolk, Oliver, **293**, 1377  
Zoltoski, Anna J., **290**, 796; **291**, 191  
Zon, Arend van, **291**, 535  
Zong, Shuqin, **299**, 299  
Zook, Christopher, **292**, 601  
Zor, Uriel, **290**, 624  
Zou, Dajin, **297**, 1033  
Zou, Yunzeng, **298**, 493  
Zu, Li X., **290**, 91  
Zubakov, Dimitri, **293**, 1377  
Zubiaur, Mercedes, **291**, 574  
Zubkov, Alexander Y., **293**, 660  
Zubkova, Inna, **294**, 35  
Zucker, Irving H., **293**, 1377  
Zuckerman, Steven H., **290**, 891; **294**, 660  
Zuppi, Cecilia, **294**, 829  
Zurgil, N., **290**, 1573  
Zygmunt, Adam, **297**, 463



ACADEMIC  
PRESS

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SCIENCE @ DIRECT®

BBRC

Biochemical and Biophysical Research Communications 290–299 (2003) 39–189

[www.elsevier.com/locate/ybbrc](http://www.elsevier.com/locate/ybbrc)

## Cumulative Subject Index for the Volumes 290–299<sup>1</sup>

### A

- A23187  
induction of p35 cleavage to p25 and tau dephosphorylation, **298**, 693
- ABA  
upregulation of mRNA encoding glycine-rich RNA-binding protein of *Sorghum bicolor*, **296**, 1063
- ABC transporter, *see* ATP-binding cassette transporter
- Abdomen  
adiposity, lowering by fenofibrate in OLETF rat, **296**, 293
- Absorption  
intestinal, cholecystokinin analogs in rat, **292**, 632
- Absorption band  
induced by interaction of apotransketolase and thiamin diphosphate, origin of, **294**, 155
- ABTS<sup>+</sup> radical cation  
removal by creatine, **290**, 47
- Abzymes  
nitrophenyl- $\beta$ -lactam hydrolysis catalyzed by rat monoclonal antibody, **299**, 273
- ACAD-9  
cloning and characterization (human), **297**, 1033
- Acarbose  
hydrolysis by *Thermotoga maritima* amylolytic enzyme resembling cyclodextrinase and  $\alpha$ -glucosidase, **295**, 818
- Acclimatization  
seasonal, regulation of ribosomal protein L41 expression in carp, **295**, 582
- Acetaldehyde  
TNF- $\alpha$  generation induced by, in Kupffer cells of ethanol-fed rats, reduction by dilinoleoylphosphatidylcholine, **299**, 459
- Acetaminophen  
effect on hepatic mRNA profiles, **290**, 518  
liver injury induced by, role of macrophage migration inhibitory factor, **294**, 225  
toxic metabolite formation, reduction of, **291**, 1089
- Acetan  
biosynthesis in *Acetobacter xylinum*, glycosyltransferase genes involved in, cloning, **295**, 230
- Acetobacter xylinum*  
cellulose, construction of high-order structure in, role of ORF2 gene, **295**, 458  
glycosyltransferase genes involved in acetan biosynthesis, cloning, **295**, 230
- Acetolactate synthase  
role of lysine residues 219 and 255 (tobacco), **293**, 433
- Acetylacetone 2,3-dioxygenase  
purification:  $\beta$ -diketone-cleaving enzyme from *Acinetobacter johnsonii*, **297**, 232
- Acetylation  
histone H3 in variable regions of TCR $\beta$  locus, relationship to gene expression, **298**, 420
- N*-Acetyl-*p*-benzoquinone-imine  
formation via cytochrome P450-dependent oxidation of acetaminophen, reduction of, **291**, 1089
- Acetylcholine  
binding at  $\alpha$ - $\delta$  subunit interface of *Torpedo marmorata* receptor, inhibition by  $\alpha$ -conotoxin MI, **295**, 791
- Acetylcholine receptor  
myasthenic autoantibodies to, RNA aptamer activity against, improvement by extended sequence selection, **290**, 656  
nicotinic, inhibitory and facilitatory actions of amyloid- $\beta$  peptides, **294**, 42
- Acetylcholinesterase  
mouse, GPI-anchored form, cell surface expression in *Klpmr1 $\Delta$*  cells of *Kluyveromyces lactis*, **298**, 559
- Acetyl-CoA carboxylase  
carboxyltransferase component, bisubstrate analog inhibitor of, **291**, 1213
- Acetyl-CoA carboxylase-1  
gene upregulation in skeletal muscle after exercise training, **296**, 395
- Acetyl-CoA carboxylase- $\beta$   
phosphorylation in muscle, dissociation from AMPK activity during prolonged exercise (human), **298**, 309
- Acetyl-CoA: $\alpha$ -glucosaminide *N*-acetyltransferase  
association with detergent-resistant microdomains in lysosomal membranes, **298**, 5
- N*-Acetylcysteine  
protective effects against structural changes in erythrocytes from non-insulin-dependent diabetes patients, **290**, 1393
- $\beta$ 1,3-*N*-Acetylgalactosaminyltransferase  
LgtD, from *Haemophilus influenzae* strain Rd, overexpression and characterization, **295**, 1
- N*-Acetylgalactosaminyltransferase 1  
lectin domain function, **298**, 755
- N*-Acetylglucosamine transferase  
*O*-GlcNAc-selective, inhibition by alloxan, **293**, 207
- $\beta$ 1,3-*N*-Acetylglucosaminyltransferase  
expression and role in prevention of cancer cell invasion in vitro, **294**, 843
- N*-Acetylglutamate synthase  
gene cloning and expression (human), **299**, 581
- Achromobacter cycloclastes*  
C-terminally truncated copper-containing nitrite reductase, crystallographic studies, **299**, 173
- Acid  $\alpha$ -glucosidase  
gene transcription, activation by Hes-1 in fibroblasts (human), **291**, 582
- $\alpha$ <sub>1</sub>-Acid glycoprotein  
protein domain, role in chiral recognition (chicken), **295**, 587
- Acidification  
cytosolic, role in establishment of permissive apoptotic environment, **290**, 1145  
elevation of intracellular Ca<sup>2+</sup> in cultured epidermal keratinocytes via vanilloid receptor subtype 1, **291**, 124

<sup>1</sup>Boldface numbers indicate volume; lightface numbers indicate pagination.



- extracellular, parallel with insulin secretion in INS-1 and HIT-T15  $\beta$  cell lines, **293**, 1168  
 rate in human umbilical vein endothelial cells, increase by thrombin, **293**, 979  
 specific granules of human eosinophils upon cellular activation, **291**, 844
- Acidophilic character  
 yeast PID261/BUD32, **296**, 1366
- Acid phosphatase  
 associated activity of mammalian purple acid phosphatase, relationship to oxygen radical-generating activity, **292**, 128
- Acinetobacter johnsonii*  
 $\beta$ -diketone-cleaving enzyme acetylacetone 2,3-dioxygenase, purification and properties, **297**, 232
- Acinetobacter lwoffii* K24  
 protocatechuate 3,4-dioxygenase, detection and characterization by proteomics using column separation, **295**, 903
- Aconitase activity  
 iron regulatory protein-1, effects of various metals, **290**, 213
- Acrogranin  
 interaction with EGF-like homeotic protein dlk in yeast two-hybrid system, **291**, 193
- Acrosome  
 biogenesis, *Tep22* role (mouse), **297**, 737
- Acrosome reaction  
 sea urchin sperm, induction by egg fucose sulfate polymer, sialoglycan, and speract, **296**, 833  
 species-specific induction by sea urchin egg sulfated fucan, structural requirements, **298**, 403
- Act1  
 alternatively spliced, identification and implications for Act1 role in oncogenesis, **296**, 406
- Actin  
 $\alpha$ -smooth muscle actin, *see* Alpha smooth muscle actin  
 association with 14-3-3 $\gamma$ , role in cell division and apoptosis in astrocytes, **296**, 657  
 depolymerization induced by  $\text{Ca}^{2+}$ , modulation by CD-31, **292**, 1092  
 filaments  
   branching by Arp2/3 complex and N-WASP, visualization and force measurement, **293**, 1550  
   myosin VI gliding along, support by binding of COD-2/DAB2, **292**, 300  
   myosin VI processive movement backward with large steps along, **290**, 311  
 globular,  $\text{Ca}^{2+}$ /calmodulin-dependent binding to p85: regulation of cytokinesis initiation in *Tetrahymena*, **292**, 1098  
 human uterine RL95-2 cell, effects of benzo[a]pyrene and TCDD, **294**, 101  
 interaction with CTGF/Hcs24 in chondrocytes, **299**, 755  
 interaction with mouse coactosin-like protein, **290**, 783  
 microspike formation, cooperative function of WICH and N-WASP in, **291**, 41  
 polymerization, Arp2/3 complex-mediated activities of WASP and WAVE1 C-terminal regions for, increase by verprolin homology domains, **297**, 214
- $\beta$ -Actin  
 expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- Actin-binding proteins  
 reduction of actin-related protein complex 2/3 and coronin-like protein p57 in fetal Down syndrome brain, **293**, 836
- Actin cytoskeleton  
 associated 5T4, interaction with PDZ protein TIP-2/GIPC, **290**, 1030  
 mitosis-dependent organization, role of LIM-kinase-1, **290**, 1315  
 requirement in early apoptosis signaling by anti-Fas antibody but not FasL in murine B lymphoma A20 cells, **290**, 268  
 role in store-mediated calcium entry into glioma C6 cells, **296**, 484
- $\alpha$ -Actinin  
 titin binding to, reduction caused by titin mutations in dilated cardiomyopathy, **291**, 385
- $\alpha$ -Actinin 1  
 mRNA, brain-specific splicing, **295**, 678
- Actinomycin C1  
 inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334
- Actinomycin D  
 apoptosis induced by, role of Kv1.3, **295**, 526  
 chondrocytes sensitized by, TNF- $\alpha$ -mediated apoptosis in, **295**, 937
- Actin-related protein  
 nuclear ArpN $\alpha$ , brain-specific expression and role in mammalian SWI/SNF chromatin remodeling complex, **299**, 328
- Actin-related protein complex 2/3, *see* Arp2/3 complex
- Activated protein C  
 inhibition by copper, protective effect of HSA and copper-binding site analogue d-DAHK, **290**, 1388
- Activating transcription factor 3  
 gene promoter, transcriptional activation by p53, **297**, 1302
- Activating transcription factor 6 $\beta$   
 physical interaction of CREB-RP/ATF6 $\beta$  with hepatitis C virus NS4B protein, **299**, 366
- Activation energy  
 and binding energy, in trypsin-catalyzed hydrolysis of oligopeptides, **290**, 494
- Activator protein-1, *see* AP-1
- Activin  
 cell adhesion changes induced by, role of rac (*Xenopus laevis*), **298**, 364
- Activin-like kinase receptor 8  
 binding of TGF- $\beta$  in presence of TGF- $\beta$ RII, **293**, 1556
- Actomyosin  
 motor domain chimera proteins, design and functional analysis, **299**, 825
- Acute phase response  
 repressed CAR and PXR repression during, associated reduction of cytochrome P450 expression (mouse), **293**, 145
- Acute promyelocytic leukemia cells  
 NB4, and HL-60 cells, gene expression in retinoic acid-induced differentiation of, **296**, 1125
- Acute renal failure  
 global gene expression in renal ischemia-reperfusion in mouse, **291**, 787
- Acylated proteins  
 in mycoplasmas, Konrad Bloch special issue, **292**, 1289
- Acyl-CoA dehydrogenase 9  
 cloning and characterization (human), **297**, 1033
- Acyl-CoA:diacylglycerol acyltransferase  
 DGAT1, gene upregulation in skeletal muscle after exercise training, **296**, 395  
 DGAT1 and DGAT2 activities, concerted elevation by carbohydrate and insulin via stimulation of mRNA expression, **298**, 317
- Acyl-CoA hydrolase  
 brain, isoforms encoded by single gene (human), **299**, 49
- Acyl-CoA oxidase  
 induction by peroxisome proliferator, **299**, 832
- Acyl-CoA thioesterase  
 very-long-chain fatty acid-specific, expression in perfused heart, control by  $\beta$ -adrenergic stimulation, **299**, 135
- ADAM9  
 human, secreted form with  $\alpha$ -secretase activity for amyloid precursor protein, cloning, **293**, 800
- ADAMTS1  
 cleavage of aggrecan at multiple sites and inhibition by metalloproteinase inhibitors, **293**, 501  
 human, protein engineering and properties, **293**, 478

- $\beta$ 2-Adaptin  
interaction with BubR1, **298**, 720
- Adaptor proteins  
AP2, subunit  $\beta$ -adaptin, interaction with BubR1, **298**, 720  
ASC, upregulation by inflammation and apoptosis in neutrophils (human), **293**, 1314  
CrkL, role in type I IFN-dependent gene transcription and activation of small G-protein Rap1, **291**, 744
- Adenine  
2-methyl-1,4-naphthoquinone-sensitized photoirradiation at 365 nm, products of, **291**, 1252
- Adeno-associated virus vectors  
gene transfer of dominant negative RhoA, enhancement of erectile function in rat, **298**, 427  
micro-dystrophin cDNA introduced by, effects on dystrophic phenotypes in *mdx* mice, **293**, 1265
- Adenoviral vector  
AdLTR-luc, long-term expression after infection by, source of, **291**, 34
- S-Adenosyl-L-methionine  
accumulation in serum, decrease in Alzheimer's disease, **293**, 1485
- Adenovirus  
apolipoprotein A-V overexpression, effect on serum levels of triglycerides and cholesterol in mouse, **295**, 1156  
bone morphogenetic protein-2 gene transfer mediated by, in mesenchymal stem cells, **292**, 144  
bone morphogenetic protein-4 gene transfer mediated by, induction of bone formation in vivo, **298**, 121  
genetic modulation of human osteoprogenitors: bone formation on PLA scaffolds in vivo, **299**, 208  
gene transfer, short MCK 1350 promoter/enhancer-driven dystrophin expression in *mdx* mouse after, **292**, 626  
helper-dependent transfer of BMP-2, enhancement of bone repair with, **297**, 523  
hyperleptinemia induced by, associated atrophic change of salivary gland (rat), **291**, 675  
murine interferon- $\gamma$  receptor transfer mediated by, effect on IFN- $\gamma$  efficacy in vivo, **290**, 1042  
p53-expressing vector, inhibition of Adriamycin-induced down-regulation of cyclin D1 expression in infected human cancer cells, **290**, 1101  
PDH kinase and PDH phosphate phosphatase overexpression mediated by, and glucose-induced insulin secretion, **291**, 1081
- recombinant  
expression of dominant negative I $\kappa$ B $\alpha$ , protection of brain from cerebral ischemic injury, **299**, 14  
H-ras ribozyme-encoding, induction of laryngeal cancer cell apoptosis by caspase- and mitochondria-dependent pathways, **298**, 805  
p14<sup>ARF</sup> overexpression mediated by, effect on breast cancer cell sensitivity to cisplatin, **296**, 792  
type 2, fiber globular region, insertion of exogenous domain in, **296**, 897
- Adenylate uridylate-rich elements  
potassium channel mRNAs with, brain-specific expression, **291**, 1265
- Adenylyl cyclase  
activation by  $\beta_2$ -adrenoceptor-G $\alpha_2$  fusion protein, **298**, 824  
cannabinoid binding site in mouse cerebellum not coupled to, **292**, 231  
modulation of, role of calcium-binding EF-hand motifs of visinin-like protein-1, **296**, 827  
receptor-mediated activity in EP2 receptor-expressing COS-7 cells, effect of Gi-coupled prostaglandin EP3 receptor, **290**, 162
- AdhE protein  
extensive overproduction by *rng* mutations, *rng*-interacting genetic factors causing, **295**, 92
- Adherens junctions  
formation, role of second immunoglobulin-like loop of nectin, **293**, 45
- Adipocytes  
adiponectin gene expression, hormonal regulation (3T3-L1 cells), **290**, 1084  
differentiation of 3T3-L1 cells to, proteasomal degradation of p130 during, **290**, 1066  
glucose transport by osmotic shock and vanadate, impairment by glucosamine, **292**, 308  
glucose uptake, stimulation by shikonin via insulin-independent tyrosine kinase pathway (3T3-L1 cells), **292**, 642  
glucose uptake and leptin expression and secretion in vitro, effects of  $\beta_3$ -adrenergic agonist (rat), **291**, 1201  
insulin resistance induced by chronic insulin treatment, partial prevention by rapamycin, **293**, 1021
- lipolysis  
enhancement in exercise-trained rats, mechanisms, **295**, 236  
stimulation in vitro by azaftig (human, rat), **293**, 847  
Mel-N1, Mel-N2, and Mel-N3 expression, **294**, 329  
nitric oxide production in, stimulation by insulin (rat), **291**, 394  
*ob* gene expression, downregulation by intracellular fatty acids (3T3-L1 cells), **297**, 1291  
oxidized LDL recognition and degradation through CD36, **295**, 319  
protein synthesis signaling cascade, activation by pancreastatin (rat), **299**, 525  
resistin expression, regulation by C/EBPs, PPARs, and signal-transducing molecules, **299**, 291  
resistin secretion, inhibition by endothelin-1 (3T3-L1 cells), **296**, 383  
sterol response element binding protein 1 transcription, relationship to insulin-stimulated fatty acid synthase gene expression, **291**, 439  
tyrosine phosphorylation of IRS-1 and insulin signaling in, regulation by proteasome inhibitors, **296**, 1257
- Adipocytokine  
directly linking adipovascular axis, HB-EGF as, **292**, 781; *erratum*, **295**, 571
- Adipogenesis  
adipose conversion of 3T3-L1 cells, identification of membrane proteins selectively expressed during, **293**, 1161  
decrease by myostatin knockout in mice, **291**, 701  
potential for, in primary myoblasts, distinguishing based on age by p130/p107 expression, **296**, 1340
- Adipokinetic hormone III precursor-related peptide  
isolation and identification from *Locusta migratoria*, **296**, 1112
- Adiponectin  
gene expression in 3T3-L1 adipocytes, hormonal regulation, **290**, 1084
- Adipose tissue  
autonomic neurons innervating, detection of leptin receptors, neuropeptide Y, and tyrosine hydroxylase (pig), **293**, 1138  
in bombesin receptor subtype-3-deficient mice, *Urb* gene upregulated in, cloning, expression, and mapping, **290**, 1282  
increased expression of HB-EGF mRNA (human, mouse), **292**, 781; *erratum*, **295**, 571  
mass, decrease by intracerebroventricular interleukin-6 treatment (rat), **293**, 560  
peroxisome proliferator-activated receptor- $\gamma$  splice variant expression (monkey), **293**, 274  
resistin expression in *db/db* mice, effect of metformin, **298**, 345  
stromal cells derived from  
chondrogenic potential in vivo and in vitro, **290**, 763  
neurogenic differentiation (human, mouse), **294**, 371  
white, resistin and RELM- $\alpha$  gene expression in lactating mice, **296**, 458



- Adiposity**  
 abdominal and skeletal, lowering by fenofibrate in OLETF rat, **296**, 293  
 characterization in *Lnma*-deficient mice, **291**, 522
- ADP**  
 induction of  $\text{Ca}^{2+}$  influx through store-operated calcium channels, effect of actin cytoskeleton, **296**, 484  
 platelet signaling induced by, role of LAT, **292**, 916
- ADP-ribose**  
 stimulation of calcium release channel RyR1 in skeletal muscle of rat, **296**, 1267
- ADP-ribosyltransferase**  
 exoenzyme S activity, in vivo substrate specificity, **291**, 91
- Adrenal capillary endothelial cells**  
 EG-VEGF/prokineticin receptors 1 and 2, identification and characterization, **293**, 396
- $\alpha_1$ -Adrenergic receptor**  
 stimulation in neonatal cardiomyocytes,  $\text{G}\alpha_q$  signaling upon, counteraction by  $\text{G}\beta\gamma$ , **291**, 995  
 subtypes, differential coupling to  $\text{Gs}$ , key amino acids for, **299**, 142
- $\alpha_{1B}$ -Adrenergic receptor**  
 anti-mitogenic pathway to c-Jun N-terminal kinase from, role of Db1's Big Sister, **296**, 85  
 intracellular  $\text{Ca}^{2+}$  signaling mediated by, characterization, **293**, 383
- $\alpha_{2A}$ -Adrenergic receptor**  
 DRY motif in, mutagenesis and peptide analysis, **293**, 1233
- $\beta$ -Adrenergic receptor**  
 stimulation, control of expression of thioesterase specific for very-long-chain fatty acids in perfused hearts, **299**, 135
- $\beta_1$ -Adrenergic receptor**  
 surface expression and dimerization, regulation by receptor glycosylation, **297**, 565
- $\beta_2$ -Adrenergic receptor**  
 fusion protein with  $\text{G}_{i2}$ , activation of adenylyl cyclase, **298**, 824  
 intracellular signal-transducing peptide derived from, solution structure (human), **291**, 1297
- $\beta_3$ -Adrenergic receptor**  
 expression in adipose tissues, alterations in 5-HT<sub>2C</sub> receptor mutant mice, **295**, 249
- Adrenomedullin**  
 exogenous, hemodynamic effects in healthy and endotoxemic sheep, **296**, 134
- Adrenomedullin receptor**  
 as clearance receptor in pulmonary circulation, **294**, 315
- Adriamycin**  
 downregulation of cyclin D1 expression in human cancer cells, inhibition by p53, **290**, 1101  
 upregulation of expression of hepatitis B virus X gene at posttranscriptional level, **296**, 1157
- ADRP**, *see* Autosomal dominant retinitis pigmentosa
- Adseverin**  
 dioxin-induced expression in thymus, regulation by aryl hydrocarbon receptor (mouse), **291**, 1194
- Adult T cell leukemia cells**  
 conformational alteration of mutated extracellular domain of Fas in RSO4 cells, **296**, 1251
- Advanced glycation end products**  
 angiogenesis in vitro induced by, inhibition by incadronate disodium, **297**, 419  
 effect on apoptosis and vascular endothelial growth factor expression in bovine retinal pericytes, **290**, 973  
 induction of injury to retinal pericytes, protective effect of pigment epithelium-derived factor, **296**, 877  
 methylglyoxal-AGE synthesis in aortic SMCs, role of semicarbazide-sensitive amine oxidase (bovine), **297**, 863
- Aerobic desaturation**  
 and *Euglena* mystery, Konrad Bloch special issue, **292**, 1239
- Affixin**  
 role of ILK–affixin complex in integrin–cytoskeleton linkage during platelet aggregation, **297**, 1324
- Age-related macular degeneration**  
 protection by Alu DNA polymorphism in angiotensin-converting enzyme gene, **295**, 668
- Agglutinin**  
 with complex carbohydrate binding efficiency, isolation from edible mushroom *Lyophyllum shimeiji* fruiting bodies, **290**, 563
- Aggrecan**  
 cleavage at multiple sites by ADAMTS1, **293**, 501  
 expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- Aggregate structures**  
 amorphous, formed from protein aggregation, indirect analysis with hydrophobic dye, **293**, 572
- Aggregation**  
 amyloid  $\beta$  peptides  
   A $\beta$ 1–42 mutants of familial Alzheimer's disease at positions 21–23, synthesis and analysis, **294**, 5  
   A $\beta$  with proline replacement: role of turn formation at positions 22 and 23, **295**, 306  
   in Alzheimer's disease, effects of pentapeptide amides, **292**, 931  
   fibrillar, poly-L-lysine as potent dissolver in vitro, **291**, 764  
 indirect analysis with hydrophobic dye, **293**, 572  
 lens  $\alpha$ A-crystallin, heat-induced, associated decrease in subunit exchange, **293**, 7  
 papain in molten globule state, effect of urea, **290**, 1441  
 platelet, integrin–cytoskeleton linkage during, role of ILK–affixin complex, **297**, 1324  
 prion protein N-terminal part, **299**, 85  
 protein  
   indirect analysis with hydrophobic dye, **293**, 572  
   unfolding-induced, manipulation by phage display-selected aggregate-binding peptides, **291**, 903  
   in transformed cells, and tube formation in NIH3T3-UCLA cells, induction by TEL, **291**, 820
- Aging**  
 associated increase in SOCS-3 expression in hypothalamus, effects of food restriction (rat), **296**, 425  
 associated reduction of nuclear protein import in fibroblasts (human), **294**, 354  
 brain, in SAMP10, acceleration by promotion of Bcl-2-linked apoptosis by nNOS upregulation, **297**, 517  
 cellular, role of somatic mutations in *p53* in extension of replicative life span of macaque cells, **295**, 644  
 effects on adipogenic potential of primary myoblasts, and p130/p107 expression, **296**, 1340  
 effects on growth factor gene and protein expression in prostate dorsal and ventral lobes (rat), **292**, 482  
 and estrogen regulation of 1,25-dihydroxyvitamin D<sub>3</sub> receptor expression and response in bone cells, **299**, 446  
*klotho* gene suppressing, regulation of angiogenesis by, **293**, 332  
 platelet protein sialic acid levels in, **297**, 502  
 related gene expression, analysis by oligonucleotide microarray data mining, **298**, 772  
 skin, UV-induced, D- $\beta$ -aspartic acid-containing peptides in elastic fibers as marker for, **294**, 1047
- Agrobacterium radiobacter**  
 N-carbamoyl D-amino acid amidohydrolase, oxidative resistance, effect of engineering solvent-accessible Met residues, **297**, 282
- AHNAK**  
 identification as autoantigen in systemic lupus erythematosus, **291**, 951
- AICAR**  
 conferral of strong tolerance to glucose starvation, 5'-AMP-activated protein kinase dependence, **290**, 263



- effect on blood glucose levels in ob/ob and db/db mice after acute and chronic treatment, **294**, 798
- aidB* gene
- promoter recognition by  $\sigma^S$ -RNA polymerase, mechanism, **292**, 922
- Airway chemoreceptors
- model receptor, acute O<sub>2</sub> sensing in, lack of role of mitochondrial electron transport, **291**, 332
- Airway epithelial cells
- functional  $\Delta F508$ -CFTR induction by *S*-nitrosoglutathione, **297**, 552
  - zinc-depleted, caspase activation, role of redox events (A549, NCI-H292 cells), **297**, 1062
- Airway epithelium
- NF- $\kappa$ B-independent regulation of LPS-mediated interleukin-6 biosynthesis, **291**, 1045
- Airways
- anti-inflammatory activity and bronchodilator effect of NO-steroids (guinea pig), **290**, 125
  - in murine asthma model, extracellular matrix deposition, promotion by PAI-1, **294**, 1155
- Airway smooth muscle cells
- thrombin-induced proliferation, attenuation by inhibitors of tyrosine kinase signaling cascade (guinea pig), **293**, 72
- A-kinase anchoring protein
- role in enhancement of adipocyte lipolysis in exercise-trained rats, **295**, 236
- Akt
- activation in astrocytes under ischemia, **294**, 726
  - dephosphorylation, and oxLDL-induced cell death mediated by LOX-1 expressed in cultured rat chondrocytes, **299**, 91
  - and G $\beta\gamma$  effects on G $\alpha_q$  signaling upon  $\alpha$ -adrenoceptor stimulation, **291**, 995
  - interaction with Bkt in B cell signaling, **293**, 1319
  - pathway, activation by apolipoprotein E in neuro-2a cells in isoform-specific manner, **292**, 83
  - PI3-kinase/Akt survival pathway
    - activation in glioma T98G cells, reduction by mutated focal adhesion kinase, **293**, 174
    - inhibition, Mcl-1 downregulation by, requirement for cell shrinkage-dependent cell death, **290**, 1275  - regulation by EGF receptor inhibitors, implications for mechanism of EGF-R inhibitor-enhanced TRAIL-induced apoptosis, **295**, 515
  - role in glucosamine-induced insulin resistance, **292**, 308
  - targeting by PPAR activators, inhibitory effect on endothelial cell migration, **293**, 1431
- Akt/Gsk3/forkhead
- signaling pathway, regulation of myeloma cell growth, **297**, 760
- Akt kinase
- regulation of FANCA phosphorylation, **291**, 628
- L-Alanine
- activation by fengycin synthetase FenE, **292**, 789
  - protective effect against D-galactosamine-induced hepatocellular injury, mechanisms, **291**, 738
- Albumin
- expression in bone marrow-derived hepatocytes, culture conditions enhancing, **298**, 24
  - production by liver epithelial cells cocultured with hepatic stellate cells, **293**, 1420
- Alcohol dehydrogenase
- AdhE, extensive overproduction by *rng* mutations, *rng*-interacting genetic factors causing, **295**, 92
- Aldehyde dehydrogenase
- human liver mitochondrial, folding in *E. coli*, mediation by GroESL, **298**, 216
- thermostable, from *Cytophaga* sp. KUC-1, characteristics and functional properties, **298**, 632
- Aldehydes
- inhibition of mitochondrial permeability transition, **291**, 215; *erratum*, **292**, 787
- ALG-2
- Ca<sup>2+</sup>-dependent interaction with annexin XI N-terminal domain, **291**, 1166
- Alkaline phosphatase
- activity, increase by helper-dependent adenoviral transfer of BMP-2, **297**, 523
  - glycophosphatidylinositol-anchored, from intestine, thermal and pH stabilities of, IR study (bovine), **292**, 874
  - human, expression and secretion into chicken eggs after in vivo gene electroporation in oviduct, **292**, 88
  - inhibition in cultured calvarial osteoblasts by GABA<sub>B</sub> receptor agonist, **293**, 1445
- n-Alkanes
- transcriptional induction of *YIALK1* encoding P450ALK1 in *Yarrowia lipolytica* via distinct *cis*-elements on promoter, **294**, 1071
- Alkyl hydroperoxide reductase
- role in organic peroxide-induced gene expression and protection against organic peroxides in *Xanthomonas campestris*, **299**, 177
- Alkylitaconates
- effect on cellulolytic active oxygen species hydroxyl radical (*Ceriporiopsis subvermisporea*), **297**, 918
- 3-Alkynoyl thioesters
- Konrad Bloch's enzymatic studies with, and direct hydration of 3-octynoyl-CoA by crotonase, **292**, 1171
- Allele frequencies
- CYP2A6*\*7, \*8, and \*10 alleles among Japanese, Chinese, and Caucasians, **290**, 318
- Allostery
- in muscle phosphofructokinase, role of Ser530, Arg292, and His662 (rabbit), **290**, 670
- Alloxan
- inhibition of O-linked *N*-acetylglucosamine transferase, **293**, 207
- $\alpha_1$ -Antitrypsin
- expression in liver epithelial cells cocultured with hepatic stellate cells, **293**, 1420
  - precursor of, in plasma, identification in Alzheimer's disease, **293**, 1566
- Alpha/beta hydrolase fold proteins
- three murine cDNAs, cloning and tissue distribution, **292**, 617
- Alpha-fetoprotein
- binding to primary macrophages (human), **296**, 507
  - expression in liver epithelial cells cocultured with hepatic stellate cells, **293**, 1420
- Alpha hairpins
- hydrophobic, peptides involved in, identification of membrane interacting segments using viral fusion peptides, **293**, 1153
- Alpha helical antimicrobial peptide
- P18, salt resistance and synergistic effect with vancomycin, **290**, 558
- Alpha helix
- presence in human CD4 cytoplasmic domain, promotion of binding to HIV-1 Nef protein, **292**, 734
- Alpha smooth muscle actin
- expression in human hepatic stellate LI90 cells, inhibition by selective COX-2 inhibitor NS-398, **297**, 1128
  - expression in smooth muscle cells, effect of TGF- $\beta$  receptor-binding peptides, **293**, 1279
- Altered peptide ligands
- priming with, associated anergy development in naive T cells, **299**, 148

## Alternative splicing

- Act1, implications for Act1 role in oncogenesis, **296**, 406  
 brain-specific,  $\alpha$ -actinin 1 mRNA, **295**, 678  
 BRCA2-associated factor 35, BRAF25 produced by  
   cDNA cloning, **295**, 129  
   immunohistological detection in human prostate tumor and  
   cancer specimens, **295**, 136  
 caspase-12 gene (human), **293**, 722  
 CIP4: isoform identification and genetic analysis (human, mouse),  
   **293**, 1426  
 cytokine receptor  $\gamma$  chain isoform produced by, identification  
   (chicken), **299**, 321  
 effect on domain structure of Nedd4 protein WWP1, **290**, 431  
 endothelin-converting enzyme-2 isoforms produced by, isolation  
   and characterization, **293**, 421  
 FGF receptor 3 soluble isoform produced by, identification and  
   characterization in SaOS-2 osteosarcoma cells, **292**, 378  
 fyn tyrosine kinase, fyn $\Delta$ 7 isoform identification, **298**, 501  
 heart-specific, neuexin 3 mRNA, variant identification and  
   characterization, **298**, 151  
 human *DBL (MCF-2)* proto-oncogene, **299**, 455  
 laminin  $\alpha$ 4 subunit, variant identification and recombinant produc-  
   tion (human), **299**, 498  
 modulation of subcellular localization of laforin, **291**, 1134  
*NFI* gene N-terminal, *NFI-10a-2* produced by, encoding of  
   transmembrane segment, **294**, 496  
 occludin gene, **298**, 657  
 p38 $\alpha$ : induction of earlier onset of apoptosis in HeLa cells by splice  
   variant Exip, **291**, 838  
 peroxisome proliferator-activated receptor- $\gamma$  in macrophages, genet-  
   ic analysis (monkey), **293**, 274  
 phosphodiesterase 8B gene, **297**, 1253  
 pregnane X receptor variants produced by, identification in liver  
   (human), **298**, 433  
 pre-mRNA, modulation by pinin in vivo, **294**, 448  
 protein phosphatase inhibitor-1 gene-encoded products of, identifi-  
   cation (human), **291**, 1293  
 TrkB gene (human), **290**, 1054
- Alu sequences  
   polymorphism, in ACE gene, protection against age-related macular  
   degeneration, **295**, 668
- Alveolar epithelial cells  
   interleukin-1 $\beta$  biosynthesis mediated by lipopolysaccharide, attenu-  
   ation by NF- $\kappa$ B blockade, **293**, 252  
   interleukin-6 biosynthesis mediated by lipopolysaccharide, NF- $\kappa$ B-  
   independent regulation, **291**, 1045  
   oxidant-induced IL-8 release in vitro, effect of antioxidant cocktail  
   EM-X (A549 cells), **296**, 1148
- Alzheimer's disease, *see also*  $\beta$ -Amyloid peptide;  $\beta$ -Amyloid precursor  
 protein  
   brain hydrogen sulfide levels in, **293**, 1485  
   brain nucleoside diphosphate kinase activity in, **296**, 970  
   familial  
     A $\beta$ 1-42 mutants at positions 21–23, synthesis, aggregation,  
     neurotoxicity, and secondary structure, **294**, 5  
     presenilin-1 mutants linked to, interference with translation  
     regulation under ER stress, **296**, 313  
   lack of pathogenic role of caspase-12, **293**, 722  
   membrane depolarization caused by aggregated A $\beta$ (1-42) peptide  
   elimination, **293**, 1204  
   mechanism, **293**, 1197  
   oxidized plasma proteins in, identification, **293**, 1566  
   presenilin-1 associated with, localization in rat mitochondria, **295**, 766  
    $\alpha$ - and  $\beta$ -secretase changes in, **299**, 373
- AmA1*  
   plant, pre-mRNA splicing in *Schizosaccharomyces pombe*, **293**,  
   1209

## Amacrine cells

- in retina, expression of mRNA of vertebrate ancient opsin isoform  
   Pal-VAM (smelt), **290**, 280
- AMD6221  
   scavenging of nitric oxide, mechanism, **292**, 519
- Amide  
   C-terminal, peptide amidicin with, identification (porcine cardiac  
   atrium), **293**, 741
- Amidicin  
   identification: porcine cardiac atrial peptide with C-terminal amide  
   structure, **293**, 741
- Amino acid activation  
   by fengycin synthetase FenE, **292**, 789  
   for protein synthesis, Konrad Bloch special issue, **292**, 1231
- Amino acid composition  
   apolipoprotein B100 of LDL, and antioxidant status, effect of  
   smoking, **292**, 175
- Amino acid number  
   between two ligand cysteines of zinc finger proteins, effect on DNA  
   binding affinity and specificity, **296**, 553
- Amino acids  
   branched-chain, effect on hepatocyte growth factor secretion by  
   hepatic stellate cells, **297**, 1108  
   key for differential coupling of  $\alpha$ 1-adrenergic receptor subtypes to  
   Gs, identification, **299**, 142  
   mediating heparan sulfate 3-O-sulfotransferase-1 enzymatic func-  
   tion, identification (human), **290**, 1214  
   regulation of ammonia pulses in yeast colonies, **294**, 962  
   trichosanthin residues crucial for IgE response, identification, **297**,  
   510
- Amino acid transport  
   *CT120* gene involved in, molecular cloning and characterization,  
   **297**, 528  
   selective upregulation of system A transporter mRNA in diabetic  
   liver, **290**, 903  
   D-serine via ATB<sup>0,+</sup> transporter expressed in colon, **291**, 291
- Amino acid transporter  
   ATB<sup>0,+</sup>, expressed in colon D-serine, transport via, **291**, 291
- Aminoacyl-tRNA synthetases  
   interactions with elongation factor 1 complex subunits, **291**, 158
- L- $\delta$ -( $\alpha$ -Aminoadipoyl)-L-cysteine-D-valine synthetase  
   production of dipeptides with valine at C-terminus, **292**, 794
- L-2-Aminobutyric acid  
   activation by fengycin synthetase FenE, **292**, 789
- $\gamma$ -Aminobutyric acid receptors  
   functional GABA<sub>B</sub> receptor, expression in cultured calvarial  
   osteoblasts, **293**, 1445
- 1-Aminocyclohexane-1-carboxylic acid  
   substitution for proline, endomorphin analogue with, structural  
   similarity to Leu-enkephalin  $\beta$ -turn, **297**, 138
- Aminoglycoside antibiotics  
   induction of pH-sensitive activation of calcium-sensing receptor,  
   **297**, 71  
   sensitivity to, effects of deafness-associated A1555G mitochondrial  
   DNA mutation, **293**, 521
- $\alpha$ -Amino-3-hydroxy-5-methyl-4-isoxazole propionic acid receptors  
   facilitation of glutamate release in osteoblasts, **297**, 452  
   inhibitory and facilitatory actions of amyloid- $\beta$  peptides, **294**, 42
- $\alpha$ -Amino-3-hydroxy-5-methyl-4-isoxazole propionate  
   hippocampal neuronal toxicity in vitro, protective effect of  
   (-)-epigallocatechin gallate, **290**, 1506
- 5-Amino-4-imidazolecarboxamide riboside, *see* AICAR
- Aminopeptidase  
   deblocking, from *Pyrococcus horikoshii*, active site of, **290**, 994
- AML1  
   CR1 gene transactivation mediated by, correlation with cellular  
   localization of TEL/AML1 fusion protein, **297**, 91



- Amlexanox  
interactions with S100 proteins: identification of putative drug binding sites, **292**, 1023
- Ammonia pulses  
in yeast colonies, control by amino acids, **294**, 962
- amnesiac gene  
higher brain functions (*Drosophila*), **297**, 427
- AMPA  
hippocampal neuronal toxicity in vitro, protective effect of (–)-epigallocatechin gallate, **290**, 1506
- 5'-AMP-activated protein kinase  
activity in muscle, dissociation from ACC $\beta$  phosphorylation during prolonged exercise (human), **298**, 309  
mediation of exercise effects on GLUT4 expression, **292**, 409  
pharmacological activation, effects on blood glucose levels in ob/ob and db/db mice, **294**, 798  
recombinant  $\alpha$  subunit, detection of AMP-activated protein kinase with, **293**, 892  
role in AICAR conferral of strong tolerance to glucose starvation, **290**, 263  
role in effects of low-intensity prolonged exercise on PGC-1 mRNA expression in epitrochlearis muscle (rat), **296**, 350
- AMP-activated protein kinase kinase  
detection with recombinant AMP-activated protein kinase  $\alpha$  subunit, **293**, 892
- AMPA receptors  
facilitation of glutamate release in osteoblasts, **297**, 452  
inhibitory and facilitatory actions of amyloid- $\beta$  peptides, **294**, 42
- Amphidinium carterae*  
thiamine and its phosphate esters from, simultaneous detection by HPLC, **291**, 344
- Amphipathic structure  
tau protein microtubule domain third repeat fragment, NMR study, **294**, 210
- Amphiphiles  
solubility in membranes, effects of phase properties and head group, **296**, 596
- Amylase  
cAMP-regulated exocytotic release by parotid acinar cells, role of phospholipase D (rat), **299**, 663  
salivary, hydrolytic mechanism: role of subsite S2' residues, **292**, 468
- $\alpha$ -Amylase  
optimal pH for, related dipeptide and characteristic dipeptide of, **299**, 647
- Amyloid  
transhyretin intermediates generating, induction of apoptosis, **294**, 309
- Amyloidosis  
peptides involved in, identification of membrane interacting segments using viral fusion peptides, **293**, 1153
- $\beta$ -Amyloid peptide  
A $\beta$ (1–40), RNA aptamers to, selection, **290**, 1583  
A $\beta$ (1–40) and A $\beta$ (25–35), action on different Ca<sup>2+</sup> channels in CA1 hippocampal neurons, **296**, 1317  
A $\beta$ (1–42), aggregated, membrane depolarization caused by elimination, **293**, 1204  
mechanism, **293**, 1197  
A $\beta$ (1–42) mutants of familial Alzheimer's disease at positions 21–23, synthesis and analysis, **294**, 5  
aggregation in Alzheimer's disease, effects of pentapeptide amides, **292**, 931  
aggregation and neurotoxicity, role of turn formation at positions 22 and 23, **295**, 306  
 $\beta$ -cyclodextrin interaction with, NMR and CD studies, **297**, 1011  
fibril formation and cytotoxicity, inhibitors with KLVFF recognition element and flexible hydrophilic disrupting element, **290**, 121  
fibrillar aggregates, poly-L-lysine as potent dissolver in vitro, **291**, 764  
generation  
from presenilin-1 and  $\beta$ APP complex, **292**, 571  
role of BACE1 interaction with nicastrin, **293**, 1228  
inhibitory and facilitatory actions on nicotinic ACh and AMPA receptors, **294**, 42  
leucine-rich repeat superfamily member induced by, identification in astrocytes (rat), **290**, 756
- $\beta$ -Amyloid peptide recognition element  
KLVFF, and flexible hydrophilic disrupting element, inhibitors of  $\beta$ -amyloid peptide fibril formation and cytotoxicity composed of, **290**, 121
- $\beta$ -Amyloid precursor protein  
BACE1 activity toward, after BACE1 interaction with nicastrin, **293**, 1228  
 $\beta$  cleavage, BACE1 enzyme for, splice variants in brain and pancreas (human), **293**, 30  
C-terminal fragments, complex with presenilin-1, amyloid  $\beta$  protein generation from, **292**, 571  
gene transcriptional activation and expression in normal human astrocytes, effects of TGF- $\beta$ , **295**, 702  
and Notch, mutually exclusive  $\gamma$ -secretase-like cleavages in human cells, **290**, 1408  
and Notch1, processing by  $\gamma$ -secretase, comparison, **299**, 569  
 $\alpha$ -secretase activity for, cloning of secreted form of human ADAM9 with, **293**, 800  
TGF- $\beta$ -induced gene transcription, role of CTCF-complex–Smad interaction, **295**, 713  
tyrosine phosphorylation and processing, role of nerve growth factor TrkA, **295**, 324
- Amylolytic enzyme  
from *Thermotoga maritima*, liberation of glucose from reducing end of substrates, **295**, 818
- Anaphase-promoting complex  
regulator CDH1, role in progression of embryonic cell cycles in *Xenopus*, **294**, 120
- Anaphylactic response  
cardiac, modulation by plant histaminase (guinea pig), **296**, 840
- Androgenetic embryo  
and parthenogenetic embryo, imprinted genes differentially expressed in, cDNA microarray screening, **290**, 1499
- Androgen receptor  
enhancement of myogenin expression and acceleration of myoblast differentiation, **294**, 408  
protein turnover, effects of agonists and antagonists, **294**, 779
- Anemia  
hemolytic, in model mice for Presbyterian hemoglobinopathy, **295**, 869
- Anergy  
fates of naive CD4<sup>+</sup> T cells determined by hierarchical signaling thresholds, **299**, 148
- Angiogenesis  
advanced glycation end products-induced, in vitro inhibition by incadronate disodium, **297**, 419  
curcumin effects, molecular mechanisms (EAT cells), **297**, 934  
endothelial cells, paracrine repercussions of preconditioning on, **291**, 261  
homocysteine effects in cultured endothelial cells, **293**, 497  
mammalian soluble Flt-1 suppressing, phylogenetic conservation in avians, **291**, 554  
paradoxical relationship to hypoxia in cancer prognosis, **299**, 676  
pathological, impairment by loss of placental growth factor (mouse), **295**, 428  
prazosin-induced, VEGF expression in skeletal muscle endothelial cells of NOS-knockout mice during, **297**, 1270  
regulation by aging suppressor gene *klotho*, **293**, 332



- regulators, release after hypocrellin-A and -B photodynamic therapy of human brain tumor cells, **298**, 520
- stimulation
- by G-CSF, role of bone marrow-derived endothelial progenitor cells (mouse), **297**, 1058
  - by poly-L-lysine/heparin in chick embryo chorioallantoic membrane, **290**, 820
- tumor
- reduction by blockade of angiotensin receptor AT1a signaling, **294**, 441
  - role of endothelial-derived gene-1, **290**, 602
  - role of inducible nitric-oxide synthase and cyclooxygenase-2 pathways, **299**, 517
  - tumor cell potential for, increase by cyclooxygenase-2, **299**, 886
- Angiogenesis
- nuclear function in endothelial cells, relationship to rRNA production, **294**, 287
- Angiopoietin-2
- selective induction by hyperbaric oxygen in human umbilical vein endothelial cells, **296**, 710
- Angiostatin
- related molecules, generation by snake venom metalloproteinases, **294**, 879
  - role in spontaneous bone and prostate cancers of pet dogs, **292**, 886
- Angiotensin II
- and captopril, effects on dendritic cells, **296**, 194
  - effect on adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084
  - effect on tyrosine kinases in estrogen-induced pituitary tumors (rat), **297**, 931
  - induction of VSMC hypertrophy, prevention by quercetin glucuronide via inhibition of JNK and AP-1 signaling pathways, **293**, 1458
  - inhibitory effect on macrophage cholesterol efflux, **290**, 1529
  - migration induced by, blocking by metalloproteinase inhibitor via inhibition of EGF receptor transactivation, **294**, 1023
  - protein kinase C activity in anterior pituitary induced by, steroid modulation, gender differences (rat), **294**, 95
  - receptor-mediated ATP release evoked by, triggering by inositol 1,4,5-trisphosphate signal, **293**, 686
  - stimulation of hepatocyte growth, role of MAP kinases, **291**, 588
- Angiotensin IV
- effect on tyrosine kinases in estrogen-induced pituitary tumors (rat), **297**, 931
- Angiotensin-converting enzyme
- gene Alu DNA polymorphism, protective effect against age-related macular degeneration, **295**, 668
  - testis, ectodomain functional boundaries, **297**, 1225
- Angiotensin-converting enzyme inhibitor therapy
- prevention of endothelin-converting enzyme-1 upregulation in failing myocardium (human), **295**, 1057
- Angiotensin receptor
- AT1a signaling, blockade of, effects on tumor growth, angiogenesis, and metastasis, **294**, 441
- Angiotensin II receptor
- type 1, role in Ang-II reduction of macrophage cholesterol efflux, **290**, 1529
  - type 1A, G protein activation of, role of DRY motif, **292**, 362
- 8-Anilidonaphthalene sulfonate
- in analysis of structural organization and conformational plasticity of amorphous aggregates of carbonic anhydrase, **293**, 572
- Animal cap
- activin-induced cell adhesion changes, role of rac (*Xenopus laevis*), **298**, 364
- Anion channels
- plasma membrane, overexpressed chloride intracellular channel protein CLIC4 as essential component of, **297**, 317
- Anionic antimicrobial peptide
- from *Bombina maxima*, cDNA cloning, synthesis, and activity, **295**, 796
- Anionic background current
- $I_{AB}$ , in guinea pig ventricular myocytes, modulation by tefluthrin, **292**, 208
- Annealing
- DNA, activity of lipocortin I heterotetramer, regulation by  $Ca^{2+}$  and  $Mg^{2+}$ , **291**, 205
- Annexin I
- heterotetramer, DNA chain unwinding and annealing activities, regulation by  $Ca^{2+}$  and  $Mg^{2+}$ , **291**, 205
- Annexin V
- binding to intracellular part of  $\beta_5$  integrin receptor subunit, **292**, 550
  - mRNA, expression in anterior pituitary cells, stimulation by GnRH, **291**, 915
- Annexin XI
- amino-terminal domain,  $Ca^{2+}$ -dependent interaction with ALG-2, **291**, 1166
- Anthocyanins
- interaction with bilitranslocase, **296**, 631
- Anthrax infection
- BLK57/B6 mouse, effect of delayed treatment with doxycycline, **297**, 506
  - in TNF receptor 1, IL-1 receptor, and iNOS genetic knockout mice, **292**, 41
- Anthrax toxin
- delivery of nucleic acid into mammalian cells, **297**, 1121
  - induction of macrophage apoptosis, **293**, 349
- Anthrax vaccine
- edible, development: expression of protective antigen in transgenic plants, **299**, 345
  - protective antigen thermostabilization by mutations at Gln277 and Phe554, **296**, 1058
- Antibacterial peptides
- porcine myeloid, PMAP-23 and analogues, structural studies in DPC micelles, **290**, 204
- Antibiotic activity
- conformation-dependent, cathelicidin-derived antimicrobial peptide tritrypticin, **296**, 1044
- Antibiotic efflux pump
- inhibitors of, in resistant *Enterobacter aerogenes* strains, **293**, 1370
- Antibodies
- anti-elongation factor 2 kinase, detection in systemic lupus erythematosus patients, **293**, 1073
  - anti-Fas, or FasL, early apoptosis signaling in murine B lymphoma cells induced by, role of actin cytoskeleton, **290**, 268
  - anti-gibberellin A<sub>4</sub>, liganded 4-B8(8)/E9 Fab fragment, crystal structure, **293**, 489
  - anti-human CD95, specificity, **297**, 459
  - anti-p53, comparison in immunoblotting, **293**, 850
  - anti-"pan" RAE-1, high levels of RAE-1 isoforms on mouse tumor cell lines assessed by, and NK susceptibility, **290**, 140
  - catalytic antibody therapy against carbaryl, **291**, 605
  - neutralizing, against oncogenic human papillomavirus, and fate of low-grade cervical intraepithelial neoplasia, **296**, 102
  - polyclonal, generation against  $\mu$ -conotoxin GIIIA using [Cys<sup>5</sup>] GIIIA immunogen site-specifically conjugated with BSA, **290**, 1037
- Antibody-assisted refolding
- enhancement of horseradish peroxidase refolding by antiperoxidase antibodies, **291**, 959
- Antibody fragments
- functional improvement with phage coat protein III fusion system, **298**, 566

- human, selection on basis of stabilization of variable domain in presence of target antigens, **295**, 31
- Antibody response  
strong, induction in sheep by in vitro self-assembled HCV core virus-like particles, **290**, 300
- Anticancer drugs  
cell cycle-dependent nucleoside-derived, CNT1 involved in uptake of, cell cycle-dependent regulation, **296**, 575  
inhibition of gastric cancer cell growth, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480
- Anticonvulsants  
preparation with host–guest strategy using hydroxypropyl- $\beta$ -cyclodextrin and benzaldehyde semicarbazone, **296**, 241
- Antifreeze proteins  
plant defensin-like gene-encoded, induction during cold acclimation (winter wheat), **298**, 46
- Antifungal activity  
peptide HP (2–20) from *Helicobacter pylori* ribosomal protein L1 N-terminus, vs. *Candida albicans*, mechanism, **291**, 1006  
SMAP-29 (1–18) isolated from sheep myeloid mRNA against *Trichosporon beigelii*, mechanism, **295**, 591
- Antifungal peptides  
PMAP-23-based analogs, design, **293**, 231
- Antifungal proteins  
isolation from pinto bean seeds and macrophage-stimulating activity, **290**, 813  
multiple, temporal generation in primed seeds, **292**, 236  
sugarcane cystatin, recombinant expression, purification, and activity, **296**, 1194
- Antigen I/II  
role in *Streptococcus mutans* binding to extracellular matrix molecules and fibrinogen, **298**, 75
- Antigen delivery route  
pH-sensitive liposomes encapsulated with K<sup>b</sup>-restricted CTL epitope in vivo, **292**, 682
- Antigen peptide  
minimal concentration, priming with, and anergy development in naive T cells, **299**, 148
- Antigen priming  
effect on  $\gamma\delta$  T cells in buccal epithelium (mouse), **294**, 626
- Antigens  
head and neck cancer, recognized by humoral immune system, **294**, 734  
target, stabilization of variable domain in presence of, human Fv selection on basis of, **295**, 31
- Anti-HIV activity  
cellular, identification of HIV-1 nucleocapsid protein:nucleic acid antagonists with, **296**, 1228
- Anti-inflammatory activity  
NO-steroids, **290**, 125
- Anti-inflammatory cytokine  
antioxidant, interleukin-10 as, **297**, 163
- Anti-inflammatory mediators  
endogenous, from arachidonate in human neutrophils, **290**, 219
- Antimicrobial peptides  
 $\alpha$ -helical, P18, salt resistance and synergistic effect with vancomycin, **290**, 558  
anionic, from *Bombina maxima*, cDNA cloning, synthesis, and activity, **295**, 796  
HP (2–20), *Helicobacter pylori* ribosomal protein L1 N-terminal, antifungal mechanism vs. *Candida albicans*, **291**, 1006  
leucocin C, complete amino acid sequence, **295**, 826  
lipopolysaccharide-binding fragment of MD-2, identification, **292**, 880  
*Rana tarahumarae* skin, inhibitory effects on growth of *Batrachochytrium dendrobatidis* in vitro, **297**, 361  
ribosomal peptide from rainbow trout skin, activity, **296**, 167  
scorpion venom-derived linear peptides, **293**, 1514  
triptirpicin, conformation-dependent antibiotic activity, **296**, 1044
- Antimicrobial proteins  
MAP30 and GAP31 produced in cucurbits with plant virus vector ZYMV-AGII, **292**, 441  
plant defensin-like gene-encoded, induction during cold acclimation (winter wheat), **298**, 46
- Antimony  
protection from, role of multidrug resistance protein 1, studies in vitro and in MRP1-deficient mice, **291**, 617
- Antioxidant activity  
apolipoprotein A-I<sub>Milano</sub>, retention by thiol-bearing synthetic peptides, **297**, 206  
pentaerythrityl trinitrate, role of heme oxygenase-1 induction, **290**, 1539  
phloretin, **295**, 9  
pigment epithelium-derived factor: protection of retinal pericytes from advanced glycation end product-induced injury, **296**, 877  
role in anti-atherogenic effects of dietary coenzyme Q10, **296**, 255
- Antioxidants  
anti-inflammatory, interleukin-10 as, **297**, 163  
chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192  
cocktail EM-X, effect on oxidant-induced IL-8 release and peroxidation of phospholipids in vitro, **296**, 1148  
direct antioxidant properties of creatine, **290**, 47  
effects on glycated albumin cytotoxicity to retinal pericytes (bovine), **292**, 1010
- Antioxidant status  
plasma and LDL-*apo* B, effect of smoking, **292**, 175
- Antisense DNA  
trisamine-modified phosphorothioate oligomer, selective binding to mRNA, effect on antisense activity and toxicity, **293**, 1341
- Antisense oligodeoxynucleotides  
in vitro transfer into coronary endothelial cells by ultrasound, **298**, 587
- Antisense oligonucleotides  
delivery to targeted cells, two-step model for, **293**, 18  
for NOSII, iontophoresis of, downregulation of NOSII gene expression in endotoxin-induced uveitis, **295**, 336  
against phospholipase D, effects on astroglial proliferation, **297**, 545  
and siRNAs, comparison in cell culture and in vivo, **296**, 1000  
for tissue factor, inhibition of hepatic ischemic reperfusion injury, **297**, 433
- Antisense RNA  
restriction of imprinting of murine *Mas* protooncogene to, **290**, 1072
- $\alpha_1$ -Antitrypsin  
expression in liver epithelial cells cocultured with hepatic stellate cells, **293**, 1420  
precursor of, in plasma, identification in Alzheimer's disease, **293**, 1566
- Antitumor activity  
MAP30 and GAP31 produced in cucurbits with plant virus vector ZYMV-AGII, **292**, 441
- Antiviral genes  
interferon- $\gamma$ -mediated induction in human hepatoma cells, role of IL-1 $\beta$  and IL-10, **294**, 414
- Anxiety  
related behavior, increase by ghrelin (rat), **299**, 739
- Aorta  
proximal, atherosclerosis in, increase by daily supplementation with melatonin (mouse), **293**, 1114  
Rab7 gene, upregulation by cholesterol-rich diet, **293**, 375
- AP-1  
activation  
role in PKC induction of breast cancer motility by upregulating secretion of u-plasminogen activator, **290**, 552  
by T2BP without TNF stimulation, **290**, 1108



- complex, expression in cortical and hippocampal neurons, effect of static magnetic field, **292**, 200
- H<sub>2</sub>O<sub>2</sub>-induced activation and effect on p21<sup>WAF1/CIP1</sup>-mediated G2/M arrest in p53-deficient human lung cancer cells, **293**, 1248
- inhibition
- by *Ganoderma lucidum* in highly invasive breast and prostate cancer cells, **298**, 603
  - after hepatectomy in rats with thioacetamide-induced liver cirrhosis, **292**, 474
- membrane association, inhibition by BIG2 dominant-negative mutant: effects on membrane trafficking from *trans*-Golgi network, **294**, 254
- role in *GADD153* gene induction by oxidative stress in vascular smooth muscle cells, **290**, 1255
- role in TNF- $\alpha$ -induced apoptosis in mouse epidermal JB6-derived RT-101 cells, **295**, 24
- signaling
- constitutively active MAP kinase kinase kinase stimulating, TAK1-TAB1 fusion protein as, **297**, 1277
  - inhibition by quercetin glucuronide, preventive effect on angiotensin II-induced VSMC hypertrophy, **293**, 1458
  - role in UVB-enhanced IL-18 production in human keratinocytes, **298**, 289
- AP-2
- and Ikaros, regulation of transcription of human placental leucine aminopeptidase/oxytocinase gene, **290**, 1048
- AP180
- binding to C-terminal SH2 domain of phospholipase C- $\gamma$ 1 and inhibition of enzymatic activity, **290**, 35
- APC, *see* Anaphase-promoting complex
- APC0576
- prevention of proinflammatory cytokine-induced chemokine production in human endothelial cells, **293**, 945
- Apelin-13
- centrally administered, effects on food intake, water intake, and pituitary hormone release (rat), **291**, 1208
- Apelin (65–77)
- activation of extracellular signal-regulated kinases via PTX-sensitive G protein, **290**, 539
- APEX nuclease
- and *O*-sialoglycoprotein endopeptidase, functional elements in bidirectional promoter of, identification (mouse), **296**, 785
- Apg7p
- murine, isolation, characterization as multi-substrates E1-like enzyme, and substrate affinities, **292**, 256
- Apg8p
- homologs, and murine Apg7p, substrate affinity of murine Apg12p for, **292**, 256
- Apg12p
- mammalian, effects on LC3 processing, **296**, 1164
  - murine, substrate preference for murine Apg7p over three Apg8p homologs, **292**, 256
- Apg12p-Apg5p conjugate
- mammalian, effects on LC3 processing, **296**, 1164
- Apical ectodermal ridge
- Msx2* expression in, regulation by *Msx2* and *Dlx5* binding site, **290**, 955
- Apical targeting
- apical secretion of serpins from MDCK cells independently of raft association, **299**, 35
- APIS complex
- physical association with general transcription factors, **296**, 991
- apo(a) gene
- activation, and binding of multiple liver-specific factors to 64-bp element, **292**, 243; *erratum*, **294**, 1193
- Apolipoprotein
- lipid efflux mediated by, high-density lipoprotein-associated, **291**, 727
- Apolipoprotein A-I
- C-terminal domain, role in ABCA1-driven phospholipid and cholesterol efflux, **299**, 801
  - free, macrophage cholesterol efflux to, in C3H and C57BL/6 mice, **290**, 1376
  - gene cluster, human, regulatory sequences from BAC DNA containing, efficient isolation, **290**, 1079
  - gene encoding, EST-based identification in liver of adult Atlantic salmon, **293**, 578
  - gene expression in hepatocytes and/or macrophages, effect of testosterone, **296**, 1051
  - regulation of intestinal cholesterol uptake, **292**, 390
- Apolipoprotein A-I<sub>Milano</sub>
- antioxidant activity, retention by thiol-bearing synthetic peptides, **297**, 206
- Apolipoprotein A-V
- adenoviral overexpression, effect on serum levels of triglycerides and cholesterol (mouse), **295**, 1156
- Apolipoprotein B
- VLDL-associated, secretion of, suppression by insulin, role of LDL receptor, **297**, 134
- Apolipoprotein B100
- LDL, amino acid composition and antioxidant status, effect of smoking, **292**, 175
- Apolipoprotein E
- activation of Akt pathway in neuro-2a in isoform-specific manner, **292**, 83
  - levels in macrophages and cholesterol-loaded foam cells, modulation by glycosphingolipids, **290**, 1361
- Apolipoprotein M
- expression in HepG2 cells, effects of platelet-activating factor, tumor necrosis factor, and interleukin-1 $\alpha$ , **292**, 944
- Apoplastocyanin
- designed variant showing reversible folding, **296**, 988
- Apoptosis
- 109 genes related to, expression profiles in 82 mouse tissues and experimental conditions, **297**, 537
  - actinomycin D-induced, role of Kv1.3, **295**, 526
  - as adaptive response facilitating heat shock survival in bovine preimplantation embryos, **295**, 37
  - arsenic trioxide-induced, in hepatocellular carcinoma cell lines, enhancement by buthionine sulfoximine, **291**, 861
  - associated with p53-independent embryonic death induced by absence of REV3, **293**, 1132
  - astrocytes, role of association of 14-3-3 $\gamma$  with actin, **296**, 657
  - Bax-induced, in yeast, suppression by soybean ascorbate peroxidase by inhibition of ROS generation, **290**, 457
  - Bax translocation to mitochondria during, prevention by Bcl-X<sub>L</sub> and calyculin A, **291**, 1258
  - Bcl-2-linked, promotion by NO synthase increase in brain of SAMP10, **297**, 517
  - breast cancer cells
    - effect of blocking of HSF1 by dominant-negative mutant, **290**, 1454
    - effect of neurotensin, **295**, 482
    - effects of non-IGF binding mutant of IGFBP-5, **294**, 995
    - induction by IGFBP-3 N-terminal region (MCF-7 cells), **293**, 55
    - induction by lipoxygenase inhibitors, mechanisms, **296**, 942
    - relationship to Mcl-1 isoforms, p21WAF1/cyclin A ratio, and Jun kinase phosphorylation (MCF-7), **297**, 943  - camptothecin-induced, role in ceramide accumulation in prostate cancer LNCaP cells, **294**, 363
  - L-canavanine-induced, in Jurkat cells, role of caspase-3 activation regulated by Bcl-2 or Bcl-xL, **295**, 283



- cardiomyocytes, effects of *CSX/NKX2-5* mutations, **298**, 493
- caspase-7 activity for, inhibition by its prodomain, **291**, 79
- cervical carcinoma cells, induction by sodium arsenite (human), **293**, 298
- DNA damage-induced, RNA polymerase II large subunit cleavage by caspases during, **296**, 954
- earlier onset, induction by p38 $\alpha$  splice variant Exip in HeLa cells, **291**, 838
- early, signaling induced by anti-Fas antibody or FasL in murine B lymphoma A20 cells, role of actin cytoskeleton, **290**, 268
- early events, analysis in individual cells by fluorescence intensity and polarization measurements, **290**, 1573
- effects of CIP29 expression or overexpression (HEK293, UT-7/Epo cells), **292**, 593
- endoplasmic reticulum stress-coupled, and caspase-12, **293**, 722
- endothelial cells, paracrine repercussions of preconditioning on, **291**, 261
- endotoxin-induced, in endothelial cells, role of TIRAP, **295**, 157
- (-)-epigallocatechin-3-gallate-induced, mechanism in osteoclasts, role of Fenton reaction, **292**, 94
- and expression of DR5-like death receptor TVB in hen ovarian follicles, **291**, 226
- expression and functional analysis of inhibitor of apoptosis protein from *Trichoplusia ni*, **293**, 675
- Fas-induced
- lipid rafts in, role of death-inducing signalling complex (human), **297**, 876
  - normal enterocyte susceptibility to, regulation on level of cIAP1 and 2, **290**, 1308
- Fas-mediated, strong suppression by Clast5/Stra13, **292**, 121
- Fas- and mitochondria-mediated, resistance to, in leukemic cells resistant to 9- $\beta$ -D-arabinofuranosylguanosine (human), **298**, 338
- fibroblasts, induction by elevated phospholipase D activity (rat), **298**, 474
- functional interaction between DAP3 and glucocorticoid receptor, **295**, 749
- gastric cancer cells, induction by anticancer drugs, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480
- gastric mucosal cells, *Helicobacter pylori* lipopolysaccharide-induced, role of ERK and p38 MAP kinase, **294**, 220
- and G $\beta\gamma$  counteraction of G $\alpha_q$  signaling upon  $\alpha$ -adrenoceptor stimulation in neonatal cardiomyocytes, **291**, 995
- genes involved in, targeted expression measurements in islets of Langerhans, reproducibility (human), **298**, 350
- glioma T98G cells, induction by mutated focal adhesion kinase, **293**, 174
- glucocorticoid-induced, gene expression patterns during, analysis with oligonucleotide arrays, **293**, 1254
- HeLa cells, cytochrome *c* release during, detection of Ca<sup>2+</sup> signal upstream of, **299**, 762
- and high glucose-induced replicative senescence, **296**, 93
- hydrogen peroxide-induced, Ets-2-induced sensitization of cells to, implications for Down's syndrome, **287**, 1003; *erratum*, **291**, 191
- 4-hydroxynonenal-induced, in osteosarcoma cells, **293**, 1502
- hypoxia-induced, inhibition by 2-deoxy-D-ribose, molecular basis, **291**, 806
- induction
- by amyloidogenic intermediates of transthyretin, **294**, 309
  - by CARP overexpression in tumor cell lines, **293**, 1396
  - by developmental regulator hTBX5, **297**, 185
  - in granulosa cells by TNF- $\alpha$  and attenuation by glucocorticoids, role of modulation of Bcl-2, **294**, 51
  - by p53 C-terminal peptide, correlation with hydrophobic properties, **298**, 439
  - by TRAIL in human articular chondrocytes in vitro, **296**, 671
- induction and CD36 upregulation, by enzymatically modified LDL in monocytes, dissociation, **290**, 988
- inhibition by DUG, **297**, 78
- interferon  $\gamma$  efficacy in vivo, effect of adenovirus-mediated transfer of murine IFN- $\gamma$  receptor, **290**, 1042
- ionic interaction of HIV-1 V3 domain with CCR5 and deregulation of T cell function, **298**, 574
- laryngeal cancer cells, induction by H-ras ribozyme-encoding recombinant adenovirus via caspase- and mitochondria-dependent pathways, **298**, 805
- leukemia M1 cells, regulation by DAPI12 ITAM motif, **291**, 296
- leukocytes of blood, induction by cytosine arabinoside, effects of p53 codon 72 genotype, **299**, 539
- lymphocytes
- associated DNA fragmentation and morphological changes (human), **294**, 872
  - mitogenically stimulated cells, effects of resveratrol (human), **297**, 1311
- macrophages, induction by *Bacillus anthracis* lethal toxin, **293**, 349
- mammary epithelial cells, role of JAK2, **296**, 139
- mesangial cells, promotion by metal-catalyzed oxidation of extracellular matrix proteins (human), **292**, 652
- microcystin-induced, in rat hepatocytes, calpain activation after mitochondrial permeability transition in, **291**, 321
- neuronal, induction by ceramide via caspase-9/caspase-3 pathway, **299**, 201
- osteoblasts undergoing, effect of 1,25-dihydroxyvitamin D<sub>3</sub> with and without E<sub>2</sub>, **299**, 446
- ovarian granulosa cells, induction by bisphenol A, **292**, 456
- p53-dependent, vs senescence, effects of Bcl-2, **298**, 282
- p53-independent, induction by p19<sup>ARF</sup> tumor suppressor, **295**, 621
- pancreatic beta cells, roles of saturated and unsaturated fatty acids, **299**, 853
- permissive environment for, relationship to decrease in intracellular superoxide anion and cytosolic acidification, **290**, 1145
- perisin-1-induced, effect of Bcl-2, **296**, 20
- pre-mature neurons differentiated from mouse ES cells with single human chromosome 21, **299**, 599
- and presenilin-1 localization in rat mitochondria, **295**, 766
- pro-apoptotic effect of CDK inhibitor p57<sup>Kip2</sup> on staurosporine-induced apoptosis in HeLa cells, **296**, 702
- and related proteins, role during parturition in prostaglandin F receptor-deficient mice, **292**, 675
- retinal pericytes
- effect of advanced glycation end products (bovine), **290**, 973
  - glycated albumin-induced, effects of antioxidants (bovine), **292**, 1010
- role in ceramide promotion of cervical tumor cell death (human), **293**, 1028
- role of Mcl-1 downregulation by inhibition of PI3-K/Akt pathway, **290**, 1275
- Sf9 cells, inhibition by silkworm hemolymph, **295**, 779
- signal transduction, Fas-induced, suppression by thymidine phosphorylase independent of enzymatic activity, **295**, 300
- species-specific differences in usage of caspase substrates, **297**, 1186
- spontaneous, in neutrophils, decrease by inhibition of cGMP-dependent protein kinase, **297**, 498
- superantigen-induced, tumor cells, mediation by cytotoxic lymphocytes, cytokines, and nitric oxide, **290**, 1336
- TNF-induced, fibroblast sensitization to, roles of DNA fragmentation factor and poly(ADP-ribose) polymerase-1, **290**, 796; *erratum*, **291**, 191
- TNF $\alpha$ -induced, in mouse epidermal JB6-derived RT-101 cells, molecular mechanism, **295**, 24
- TNF $\alpha$ -mediated, in chondrocytes sensitized by MG132 or actinomycin D, **295**, 937
- $\alpha$ -tocopheryl succinate-induced, dependence on pro-vitamin-to-vitamin conversion, **293**, 1309

- TRAIL-induced  
 EGF receptor inhibitor-enhanced, implications of Akt regulation by EGF-R inhibitors, **295**, 515  
 IFN- $\gamma$  enhancement of, role of inhibition of TRAIL-induced IAP-2 upregulation, **291**, 233  
 inhibition in BJAB cells by Epstein–Barr virus BHRF1, **297**, 682  
 inhibition by hypoxia, **291**, 150  
 relationship to DAP3 (Jurkat cells), **297**, 880  
 upregulation of ASC in neutrophils (human), **293**, 1314
- X-ray-induced  
 DLD-1 cells, augmentation by caspase-8 gene transduction, **292**, 347  
 Ku80-deficient xrs5 cells, suppression by power frequency magnetic fields, **292**, 355
- Apoptotic peptide  
 pierisin, from cabbage butterflies, editorial, **296**, 1037
- Aptamers  
 molecular aptamer beacons for real-time protein recognition, **292**, 31  
 RNA, *see* RNA aptamers
- AQR1*  
 yeast plasma membrane transporter conferring resistance to monocarboxylic acids and quinidine, **292**, 741
- Aquaporin-1  
 effects of mineralocorticoid deficiency (rat), **299**, 285  
 gene, hypertonicity-responsive element in, identification and characterization, **292**, 771  
 gene induction by retinoic acid in erythroleukemia HEL cells, **293**, 913
- Aquaporin-2  
 effects of mineralocorticoid deficiency (rat), **299**, 285  
 transcript, differential regulation by dietary salt in Sprague–Dawley and Dahl SS/Jr rats, **296**, 755
- Aquaporin-3  
 effects of mineralocorticoid deficiency (rat), **299**, 285
- Aquaporin-4  
 effects of mineralocorticoid deficiency (rat), **299**, 285  
 inner ear expression and role in hearing (knockout mouse), **297**, 987
- Aquaporin-10 gene  
 identification as pseudogene (mouse), **294**, 630
- Aquifex aeolicus*  
 leucyl-tRNA synthetase  $\beta$  subunit, role in cognate tRNA recognition, **297**, 950
- 9- $\beta$ -D-Arabinofuranosylguanine  
 cytotoxicity, acquired resistance to, role of low mitochondrial deoxyguanosine kinase level, **293**, 1489  
 leukemic cells with acquired resistance to, resistance to Fas- and mitochondria-mediated apoptosis (human), **298**, 338
- Arachidonate  
 in human neutrophils, endogenous anti-inflammatory mediators from, **290**, 219  
 release, promotion by group IIE phospholipase A<sub>2</sub>, **292**, 689
- Arachidonic acid  
 effect on intracellular calcium in erythrocytes, **293**, 974  
 in liver, changes after induction of synthetic pathway, **299**, 832  
 in mononuclear cells, effects of dietary coenzyme Q10, **296**, 255  
 stimulation of leptin internalization by human placental choriocarcinoma BeWo cells, **299**, 432  
 sulfur mustard-induced release, mediation by phospholipase D in keratinocytes (human), **295**, 1062  
 suppression of  $\Delta^6$  desaturase, mediation by E-box-like sterol regulatory element, **296**, 111
- N*-Arachidonylglycine  
 selective oxygenation by cyclooxygenase-2, **296**, 612
- A-Raf kinase  
 binding to phosphorylation-independent sites on p85 SH2 domains, **290**, 1267
- Arenaviruses  
 New World, phylogeny based on small genomic segment, **296**, 1118
- ARF-related protein 1  
 genomic organization and promoter analysis (mouse), **292**, 113
- Arginine  
 $\alpha$ 99Arg role in formation of complex salt bridge network in HbA of tufted duck, **291**, 176  
 antimetabolite L-canavanine, induction of Jurkat cell apoptosis via caspase-3 activation regulated by Bcl-2 or Bcl-xL, **295**, 283  
 Arg292 role in allosteric behavior of muscle phosphofructokinase (rabbit), **290**, 670  
 deimination in nucleophosmin/B23 and histones in HL-60 granulocytes, **290**, 979  
 in domain V of macrophage scavenger receptor MARCO, role in bacterial binding, **290**, 1462  
 or histidine, substitution of Lys in type I membrane proteins, and protein localization to endoplasmic reticulum, **291**, 751  
 three-residue signal R $\times$ R, conferral of localization of reporter protein in inner nuclear membrane, **291**, 966
- L-Arginine  
 potentiation of leptin effects on erythrocyte membrane fluidity, EPR study, **297**, 672
- Arginine vasopressin  
 release by hypothalamic explants, effects of centrally administered apelin-13 (rat), **291**, 1208
- Arg tyrosine kinase  
 role in homologous recombinatorial DNA repair, **299**, 697
- ARHGAP10  
 encoding potentially cytoskeletal Rho-GTPase activating protein (human), **294**, 579
- Aromatase  
 oxazolidinone-based compounds as inhibitors of, **294**, 380
- Aromatic  $\alpha$ -hydroxy acid dehydrogenase  
 trypanosomal, specificity of, analysis by site-directed mutagenesis, **293**, 633
- Arousal response  
 orexin A-induced, role of histaminergic neurons, **290**, 1237
- Arp2/3 complex  
 N-WASP-activated, actin filament branching caused by, visualization and force measurement, **293**, 1550  
 N-WASP and WAVE1 C-terminal region actin polymerization activities mediated by, increase by verprolin homology domains, **297**, 214  
 reduction in fetal Down syndrome brain, **293**, 836
- ARR4/ATRR1/IBC7  
 and ARR8/ATRR3 response regulators, of *Arabidopsis*, overexpression, effects on cytokinin responses, **293**, 806
- ARR8/ATRR3  
 and ARR4/ATRR1/IBC7 response regulators, of *Arabidopsis*, overexpression, effects on cytokinin responses, **293**, 806
- Array comparative genomic hybridization  
 gene amplification profiling of esophageal squamous cell carcinomas by, **296**, 152
- Arrhythmogenic right ventricular dysplasia/cardiomyopathy type 2  
 associated mutations in RyR2 calcium channel, effects on binding to FKBP12.6, **299**, 594
- Arsenate  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653
- Arsenic  
 8-hydroxyguanine generation induced by, association with repair activity inhibition (A549 cells), **297**, 924
- Arsenic trioxide  
 apoptosis induced by, enhancement in hepatocellular carcinoma cell lines by buthionine sulfoximine, **291**, 861



## Arteries

- Rab7 gene, upregulation by cholesterol-rich diet, **293**, 375
- relaxation by leukemia inhibitory factor via endothelium-dependent mechanism, **294**, 359

Arylamine *N*-acetyltransferase

- in silico sequence analysis, **293**, 783

Arylamine *N*-acetyltransferase 2

- three-dimensional model: active site loop and structural basis of slow acetylator phenotype of R64Q variant, **291**, 116

## Aryl hydrocarbon receptor

- regulation of dioxin-induced adseverin expression in thymus (mouse), **291**, 1194
- and TCDD, regulation of human cytomegalovirus replication, **296**, 651

## Asb4

- imprinted gene identified by high-throughput screening using RIKEN cDNA microarray, **290**, 1499

## ASC

- upregulation by inflammation and apoptosis in neutrophils (human), **293**, 1314

## Asciadiacyclamide

- derivative produced by chiral modification of oxazoline residue, flat squared conformation, **297**, 143

## Ascites fluid

- accumulation after induction of endothelial and mesothelial cell hyperpermeability by tumor autocrine motility factor, **293**, 192

## Ascorbate peroxidase

- soybean, suppression of Bax-induced apoptosis in yeast by inhibition of oxygen radical generation, **290**, 457

L-Ascorbic acid, *see* Vitamin C

## Asialoglycoprotein receptors

- palmitoylation-defective, normal and defective characteristics (SK-Hep-1 cells), **297**, 980

## d-Asp-d-Ala-d-His-d-Lys

- protective effect against copper-induced inhibition of activated protein C, **290**, 1388

## D-β-Aspartic acid

- peptides containing, in elastic fibers of sun-damaged skin, **294**, 1047

## Aspartic protease

- active site, Tyr75 orientation in, analysis (*Saccharomyces cerevisiae*), **295**, 1020
- secreted, of *Candida albicans*, inhibition by peptidomimetic series active on HIV-1 protease, **297**, 1350

*Aspergillus nidulans*

- csmA* gene translation as single polypeptide and regulation by osmotic conditions, **298**, 103

*Aspergillus niger* NRRL 3135

- phytase activity at pH 4.0, effects of site-directed mutagenesis at residue 300, **297**, 1016

*Aspergillus terreus*

- blasticidin-S deaminase, structure/function of flexible C-terminal region, **290**, 421

## Aspirin

- effect on expression of *MRP* and  $\gamma$ -glutamylcysteine synthetase genes in human colon cancer cells, **290**, 1427
- effect on gene expression profile of colon cancer cells, **292**, 498
- potent inhibition of oxidative DNA strand breaks, **293**, 705
- and salicylic acid,  $\zeta$ -crystallin selectivity for, **293**, 440

## Asthma

- genome-wide multilocus analysis, **295**, 771
- murine model, extracellular matrix deposition in airways of, promotion by PAI-1, **294**, 1155

## Astrocytes

- $\beta$ -amyloid-induced member of leucine-rich repeat superfamily, identification (rat), **290**, 756

- cell division and apoptosis, role of 14-3-3 $\gamma$  association with actin, **296**, 657

- glia maturation factor overexpression, initiation of immune activation of microglia via GM-CSF secretion, **294**, 238

- glutamate release, stimulation by L-*trans*-PDC release: enhancement of hippocampal neuronal activity, **295**, 376

- and hypoxia/reoxygenation, role in blood-brain barrier development, **290**, 325

- under ischemia, Erk1/2 and Akt activation in, **294**, 726

- low-density lipoprotein receptor-related protein expression in primary culture, effect of serum deprivation, **299**, 102

- normal,  $\beta$ -amyloid precursor protein gene transcription, effects of TGF- $\beta$  (human), **295**, 702

- phospholipase D stability in primary cultures, **297**, 545

- TGF- $\beta$ -induced APP gene transcription, role of CTCF-complex-Smad interaction, **295**, 713

## Asymmetric dimethyl-L-arginine

- attenuation of leptin effects on erythrocyte membrane fluidity, EPR study, **297**, 672

## Ata3

- imprinted gene identified by high-throughput screening using RIKEN cDNA microarray, **290**, 1499

## Ataxia-telangiectasia nuclear extract

- end-joining of DNA double-strand breaks by, characteristics, **297**, 275

ATB<sup>0,+</sup>

- expressed in colon, transport of D-serine via, **291**, 291

## ATF3

- gene promoter, transcriptional activation by p53, **297**, 1302

ATF6 $\beta$ 

- physical interaction with hepatitis C virus NS4B protein, **299**, 366

## Atherogenesis

- implications of LDL apolipoprotein-mediated lipid efflux from cells, **291**, 727

- modulation of apolipoprotein E levels in macrophages and cholesterol-loaded foam cells by glycosphingolipids, **290**, 1361

## Atherosclerosis

- anti-atherogenic effects of dietary coenzyme Q10, non-antioxidant mechanism, **296**, 255

- effect of secretory phospholipase A<sub>2</sub> deficiency (mouse), **294**, 88

- obesity-associated, pathogenesis, HB-EGF as adipocytokine in, **292**, 781; *erratum*, **295**, 571

- pathogenesis, role of HGF/Met signaling pathway in vascular smooth muscle cells, **298**, 80

- in proximal aorta, increase by daily supplementation with melatonin (mouse), **293**, 1114

- $\alpha$ -tocopheryl succinate activity against, dependence on pro-vitamin-to-vitamin conversion, **293**, 1309

## Atherosclerotic plaque

- in human artery, increased Rab7 expression in, **293**, 375

## Atomic force microscopy

- integration host factor-induced DNA bending structure of promoter regulatory region on *Pseudomonas* TOL plasmid, **291**, 361
- membrane pore formation by Bax, **298**, 744

## Atomic resolution structure

- major endoglucanase from *Thermoascus aurantiacus*, **296**, 161

## Atopic dermatitis

- blood cells from patients, cloning and characterization of highly expressed *ETEA* gene from, **297**, 1282

- genetic variants of receptors for thromboxane A<sub>2</sub> and IL-4 in, **292**, 776

- genome-wide multilocus analysis, **295**, 771

## ATP

- affinity of zebrafish P2X<sub>4</sub> and P2X<sub>5</sub> subunits for, **295**, 849

- binding

- by *Caenorhabditis elegans* CED-4, **290**, 359



- to Na<sup>+</sup>/K<sup>+</sup>-ATPase  $\alpha$ -subunit, role of Phe<sup>475</sup>, Glu<sup>446</sup>, and Ser<sup>445</sup>, **297**, 154
- role in stabilization of FtsH–unfolded protein complex, **296**, 8
- binding and hydrolysis by CbbQ, and CbbQ autophosphorylation, **290**, 1434
- depletion mediated by ethionine in rat liver, hypophosphorylation of translation initiation regulators during, **298**, 235
- dissociation of human topoisomerase I from complex with RNA and regulation of topoisomerase I activity, **297**, 593
- modulation of I<sub>A</sub> channel inactivation in skeletal muscle (frog), **291**, 1287
- production in organotypic culture of thyroid tissue maintaining three-dimensional follicles with C cells for long term, **294**, 906
- receptor-mediated release, triggering by inositol 1,4,5-trisphosphate signal, **293**, 686
- role in SNARE/caveolin-1 interaction in hippocampus, **291**, 1232
- synthesis, relationship to biphasic oxidation of mitochondrial NAD(P)H, **291**, 170
- and topoisomerase I, activation of cDNA synthesis of HIV-1, **294**, 509
- ATPase**
- DNA helicase 45 activity as, inhibition by DNA-binding agents (pea), **294**, 334
- mitochondrial, subunit 6 gene polymorphisms in young obese adults, **290**, 1199
- myosin VI activity as, effect of DOC-2/DAB2, **292**, 300
- ATP-binding cassette transporter**
- A1, role in IL-1 $\beta$  secretion from macrophages and monocytes, **291**, 598
- ABCA1**
- carboxyterminus, interaction with  $\beta$ 2-syntrophin/utrophin complex, **293**, 759
- dominant expression on basolateral surface of Caco-2 cells stimulated by LXR/RXR ligands, **296**, 625
- expression, promotion by cAMP-specific phosphodiesterase 4 inhibitors, **290**, 663
- full expression, role of PPAR $\gamma$ , **290**, 707
- function on hepatocyte basolateral surface, **297**, 974
- gene expression in hepatocytes and/or macrophages, effect of testosterone, **296**, 1051
- mRNA expression, effect of angiotensin II, **290**, 1529
- mutations in Japanese patients with HDL deficiency, expression and functional analyses, **290**, 713
- phospholipid and cholesterol efflux driven by, role of apolipoprotein A-I C-terminal domain, **299**, 801
- role in LDL apolipoprotein-mediated cholesterol efflux from cells, **291**, 727
- ABCA8**, functional analysis, **298**, 41
- ABCC13**, truncated, high-level expression in fetal human liver, **299**, 410
- ABCG2**
- conferral of resistance to indolocarbazole compounds by ATP-dependent transport, **299**, 669
- human nestin-positive islet-derived progenitor cells expressing, side population cells in, **293**, 670
- ABCG5–ABCG8** gene cluster, potential regulatory elements in, comparative genome analysis, **295**, 276
- cholesterol-responsive ABCA9, molecular structure, **295**, 408
- interactions with *PEX19* splice variants (human), **291**, 1180
- multidrug resistance protein at blood–brain barrier, identification, **293**, 1273
- PMP70 on hepatic peroxisomal membranes, nucleotide-induced conformational changes, **291**, 1245
- ATP(CTP):tRNA nucleotidyltransferase**
- mRNA, differential processing (*Xenopus*), **297**, 573
- ATP<sub>1</sub> receptor**
- ATP release mediated by, triggering by inositol 1,4,5-trisphosphate signal, **293**, 686
- ATP synthase**
- fusion protein with DsRed, reduction of oligomerization of, **298**, 707
- ATP transporter**
- peroxisomal, human PMP34 identification as, **299**, 494
- Atrial natriuretic peptide**
- regulation of NF- $\kappa$ B pathway, **295**, 1068
- A-type flavoprotein**
- Synechocystis*, module fusion in, condensation of multiple-component pathway in single polypeptide chain by, **294**, 82
- AU-motif-directed display**
- identification of KRAB-containing zinc finger protein ZNF304, **293**, 1066
- Autoantibodies**
- to DNA binding protein B, as serologic marker in systemic sclerosis, **299**, 549
- myasthenic, RNA aptamer activity against, improvement by extended sequence selection, **290**, 656
- systemic lupus erythematosus-associated, identification, **295**, 119
- Autoantigens**
- AHNAK, in systemic lupus erythematosus, **291**, 951
- Ro52, ubiquitination, **295**, 774
- Autocatalytic activation**
- proprotein convertase PACE4A, coupled with secretion, role of C-terminal region, **290**, 878
- Autocrine motility factor**
- tumor-secreted, induction of hyperpermeability of endothelial and mesothelial cells and accumulation of ascites fluid, **293**, 192
- Autoimmune disease**
- AHNAK identification as autoantigen in, **291**, 951
- B cell targets in, identification by immunoscreening of phage-displayed cDNA-encoded polypeptides, **298**, 169
- Autolysis**
- cell wall, induction by  $\beta$ -lactams via depolarization of membrane potential, **290**, 1169
- HIV-1 protease, effects of remote mutation, X-ray and NMR studies, **294**, 395
- Autonomously replicating sequence**
- plasmid, in yeast, silkworm rDNA nuclear matrix attachment region function as, **299**, 723
- Autonomous positioning**
- transmembrane segments in multispinning membrane protein, **296**, 1
- Autophagy**
- effects of mammalian Agp12p and Apg12p:Apg5p conjugate on LC3 processing, **296**, 1164
- substrate specificity of murine Apg12p for murine Apg7p over three Apg8p homologs, **292**, 256
- Autophosphorylation**
- Ca<sup>2+</sup>/calmodulin-dependent protein kinase II dynamics after acute myocardial ischemia (rat), **297**, 997
- CbbQ, role of Mg<sup>2+</sup>, **290**, 1434
- Fer kinase, regulation by plectin, **296**, 904
- interleukin-1 receptor-associated kinase IRAK-M, **293**, 1472
- Autoprocessing**
- subtilisin YaB-G124A, site of, mutational analysis, **291**, 165
- Autoradiography**
- in vitro localization of <sup>125</sup>I-secretin receptor binding sites in rat brain, **292**, 133
- Autosomal dominant retinitis pigmentosa**
- associated rhodopsin mutations, biochemical phenotypes, **297**, 847
- Ax1 receptor tyrosine kinase**
- interaction with C1-TEN, **299**, 793
- Axis determination**
- associated *Drosophila* TGF- $\alpha$ -like protein gurken, direct binding to EGF-receptor homolog Egfr, **291**, 731

## Axonal guidance molecule

UNC5H2, modulation of  $G_{i2}$  signaling, **297**, 898

## 5-Aza-2'-deoxycytidine

cytotoxicity in cells transduced with deoxycytidine kinase gene, **293**, 1478

## Azaftig

stimulation of in vitro lipolysis by rodent and human adipocytes, **293**, 847

*Azotobacter vinelandii*

functional expression of FeMo cofactor-specific *nifEN* genes as NifE-N fusion protein synthesizing unit, **299**, 233

## Azurocidin

neutrophil, N-glycans from, structural analysis (human), **293**, 213

## B

## B22956/1

hepatic transport in vitro and in vivo, role of MRP protein, **293**, 100

## BACE1

interaction with nicastrin, **293**, 1228

splice variants in brain and pancreas (human), **293**, 30

*Bacillus anthracis*

infection of BLK57/B6 mouse, effect of delayed treatment with doxycycline, **297**, 506

infection in TNF receptor 1, IL-1 receptor, and iNOS genetic knockout mice, **292**, 41

lethal toxin from, induction of macrophage apoptosis, **293**, 349

protective antigen, thermal inactivation, role of Gln277 and Phe554 residues, **296**, 1058

toxin from, delivery of nucleic acid into mammalian cells by, **297**, 1121

*Bacillus halodenitrificans*

manganese superoxide dismutase, crystallization and crystallographic analysis, **294**, 60

*Bacillus stearothermophilus*

DNA-binding protein HU, compact form of DNA induced by, **290**, 546

*Bacillus subtilis*

fengycin synthetase FenE, amino acid activated by, **292**, 789

growth, isoprene release during, and isoprene synthase activity, **294**, 71

inorganic pyrophosphatase, activity and conformational integrity, role of C-terminal sequence, **290**, 806

## Bacteria

binding by macrophage scavenger receptor MARCO, role of arginine residues in domain V, **290**, 1462

evolution, analysis based on FtsZ protein structures, **293**, 155

fatty acid biosynthesis, Konrad Bloch's contributions to studies of, **292**, 1155

$\beta$ -galactosidase activity measurement in 96-well arrays, **290**, 397; *erratum*, **292**, 292

lateral gene transfer to vertebrates, absence of evidence for arylamine N-acetyltransferases, **293**, 783

whole chromosomes, analysis of bilateral inverse symmetry in, **299**, 126

## Bacterial artificial chromosome

DNA, efficient isolation of regulatory sequences from, **290**, 1079

## Bacterial luciferase

thermostable monomeric, generation from *Photobacterium luminescens*, **296**, 1072

## Bacterial symbiont

*Buchnera*, orphan genes of, experimental validation, **292**, 263

Bacteriophage, *see also* Phage display

coat protein III, fusion system with, functional improvement of antibody fragments using, **298**, 566

gene transfer by, effect of nuclear localization signal, **297**, 779

## Bacteriophage L7

adsorption efficiency, effect of mutation in *Xanthomonas campestris xanA* gene, **291**, 338

## Bacteriophage-type RNA polymerase

plastid-targeted, non-AUG mRNA translation initiation (*Nicotiana sylvestris*), **299**, 57

## Baculovirus/insect cell expression system

## Sf9 cells

*Caenorhabditis elegans* CED-4 expressed in, subcellular localization, oligomerization, and ATP binding, **290**, 359

dopachrome conversion enzyme of *Aedes aegypti*: expression and functional characterization, **290**, 287

slow  $\alpha$  tropomyosin wild type and Met9Arg mutant causing nemaline myopathy, **296**, 300

Sf21 cells, telomerase catalytic subunit expression: activity reconstitution, **298**, 144

## Baicalein

induction of apoptosis in breast cancer cells, mechanism, **296**, 942

## Bailar artery

mitogen-activated protein kinase activation by KCl (rabbit), **293**, 660

## Balloon angioplasty

arterial neointima formation after, effect of YC-1, **291**, 1014

## BARD1

ring finger domain, engineered ubiquitin ligase with, targeted substrate degradation by, **295**, 370

## Base frequency

at second codon position of *Vibrio cholerae* genes, and protein function, **290**, 81

Basic fibroblast growth factor, *see* Fibroblast growth factor 2

## Basic helix-loop-helix domain

E47 transcription factor, DNA-binding activity, role of other protein regions, **290**, 1521

## Basic helix-loop-helix genes

upregulation during neuronal differentiation of Wnt-1-overexpressing P19 cells, **293**, 167

## Basic helix-loop-helix/PAS proteins

MOP3, role in hypoxia responses, **290**, 1228

## Basolateral peptide transporter

in small intestine, identification of candidate membrane protein for, **296**, 918

## Basophils

Fc $\epsilon$ RI expression, effect of peroxisome proliferator-activated receptor ligands (KU812 cells), **297**, 193

*Batrachochytrium dendrobatidis*

growth in vitro, inhibitory effects of antimicrobial peptides in skin of Tarahumara frog, **297**, 361

## Bax

apoptosis induced by, in yeast, suppression by soybean ascorbate peroxidase by inhibition of ROS generation, **290**, 457

enhanced expression, and metal-catalyzed oxidation of ECM proteins and apoptosis promotion in mesangial cells, **292**, 652

formation of membrane pores by, **298**, 744

intracellular localization using chimeric protein, **290**, 332

and paracrine repercussions of preconditioning on angiogenesis and apoptosis of endothelial cells, **291**, 261

translocation to mitochondria during apoptosis, prevention by Bcl-X<sub>L</sub> and calyculin A, **291**, 1258

upregulation, role in bisphenol A induction of apoptosis in ovarian granulosa cells, **292**, 456

## BAY 41-2272

activation of  $\alpha_1/\beta_1$  and  $\alpha_2/\beta_1$  isoforms of nitric oxide-sensitive guanylyl cyclase, **292**, 1057

## BAZF gene

cloning and characterization (human), **291**, 567



- B-cell autoepitopes  
thyroperoxidase, constitution and clustering in folded immunodominant region, **295**, 1118
- B cells  
activation, Clast5/Stra13 as negative regulator (mouse), **292**, 121  
IgE heavy chain germline transcript expression, inhibition by PPAR- $\gamma$  ligands (DND39 cells), **295**, 547  
interleukin-4-activated Stat6 activity, phytochemical inhibition, **292**, 841  
 $\mu$  enhancer activation, block by dominant-negative HMGA1, **292**, 427  
response to bovine serum albumin: epitope characterization, **293**, 1348  
resting, MHC class II-mediated signal transduction in, role of ERK, p38 MAP kinase, and PKC, **291**, 139  
signaling, Akt-Bkt interaction in, **293**, 1319  
targets in autoimmune disease, identification by immunoscreening of phage-displayed cDNA-encoded polypeptides, **298**, 169
- Bcl-2  
apoptosis linked to, promotion by NO synthase increase in brain of SAMP10, **297**, 517  
caspase-3 activation regulated by, role in L-canavanine induction of Jurkat cell apoptosis, **295**, 283  
dephosphorylation after prolonged mitotic arrest induced by paclitaxel, role of PP1 phosphatase, **294**, 504  
downregulation, role in bisphenol A induction of apoptosis in ovarian granulosa cells, **292**, 456  
effect on pterisin-1-induced apoptosis in HeLa cells, **296**, 20  
expression  
after exposure to power frequency magnetic fields in Ku80-deficient xrs5 cells, **292**, 355  
increase by hypoxia, role in hypoxia inhibition of TRAIL-induced apoptosis, **291**, 150  
during parturition in prostaglandin F receptor-deficient mice, **292**, 675  
modulation, role in apoptosis induction in granulosa cells by TNF- $\alpha$  and attenuation by glucocorticoids, **294**, 51  
p53-p21<sup>WAF</sup>-Bcl-2 network in intestinal epithelial cells, role of Cdx1 homeobox gene, **297**, 607  
and paracrine repercussions of preconditioning on angiogenesis and apoptosis of endothelial cells, **291**, 261  
promotion of p53-dependent senescence versus apoptosis without effecting G1/S transition, **298**, 282  
role in lipoxygenase inhibitor-induced apoptosis in breast cancer cells, **296**, 942  
transcriptional activation in breast cancer cells by neurotensin, **295**, 482
- BCL6 oncogene  
human homologue *BAZF* gene, cloning and characterization, **291**, 567
- Bcl-xL  
caspase-3 activation regulated by, role in L-canavanine induction of Jurkat cell apoptosis, **295**, 283  
prevention of Bax translocation to mitochondria during apoptosis, **291**, 1258  
upregulation, association with resistance of leukemic cells to 9- $\beta$ -D-arabinofuranosylguanosine (human), **298**, 338
- Behavior  
effects of cocaine in mice lacking Ca<sub>v</sub>2.3 ( $\alpha_{1E}$ ) calcium channel, **299**, 299
- Benzaldehyde semicarbazone  
and hydroxypropyl- $\beta$ -cyclodextrin, inclusion compound with, anti-convulsant activity, **296**, 241
- Benzo[a]pyrene  
effect on cell attachment and adherens junction proteins in human uterine RL95-2 cells, comparison with TCDD, **294**, 101
- Benzo[a]pyrene-7,8-dione  
induction of double base lesions of DNA, **290**, 778
- Benzothiazoles  
inactivation of triosephosphate isomerase from *Trypanosoma cruzi*, **295**, 958
- Bergmann glial cells  
mitochondria, tricarboxylate carrier BBG-TCC localization in, **295**, 463
- Beryllium  
and lithium, inhibition of glycogen synthase kinase-3: two magnesium-binding sites, **290**, 967
- Betacellulin  
solution structure, **294**, 1040
- $\beta$ ig-h3  
support of keratinocyte adhesion, migration, and proliferation through  $\alpha 3 \beta 1$  integrin, **294**, 940
- Beta<sub>2</sub>-microglobulin  
association with MR1 protein, **290**, 722  
downregulation in human cord blood somatic stem cells after transplantation into SCID mouse liver, **294**, 1052
- Beta oxidation  
leukotriene degradation by, peroxisomal enzymes involved in, identification, **293**, 269
- Beta structure  
formation by N-terminal part of prion protein, **299**, 85
- Bezafibrate  
and statin, as ligands for PPAR isotypes and effects on induction of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131
- BHRF1  
Epstein-Barr virus, inhibition of TRAIL-induced apoptosis in BJAB cells, **297**, 682
- Bicalutamide  
effect on androgen receptor protein turnover, **294**, 779
- Bid  
TRAIL-induced cleavage resulting in BJAB cell apoptosis, inhibition by Epstein-Barr virus BHRF1, **297**, 682
- Bidirectional promoter  
APEX nuclease and *O*-sialoglycoprotein endopeptidase genes, functional elements in, identification (mouse), **296**, 785
- BIG2  
dominant-negative mutant, effects on membrane trafficking from trans-Golgi network, **294**, 254
- Biglycan  
expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- Biguanide compounds  
enhancement of glucagon-like peptide 1 secretion, **298**, 779
- Bilateral inverse symmetry  
in whole bacterial chromosomes, analysis, **299**, 126
- Bile  
excretion of biliverdin isomers and C10-substituted biliverdins in Mrp2-deficient (TR)<sup>-</sup> rats, **293**, 1077
- Bile acids  
effects on expression of phenobarbital-inducible cytochromes P450, **291**, 378  
membrane-type receptor for, identification, **298**, 714
- Bile acid synthesis  
and cholesterol and hydroxycholesterols: Konrad Bloch special issue, **292**, 1147
- Biliary anionic peptide factor  
regulation of intestinal cholesterol uptake, **292**, 390
- Bilirubin  
conjugation, induction in primary rat hepatocyte culture, **291**, 29  
metabolites in urine, effects of psychological stress (human), **293**, 517  
protective role in pentaerythrityl trinitrate effect on HO-1 expression and catalytic activity in endothelial cells, **290**, 1539



- Bilitranslocase**  
interaction of anthocyanins with, **296**, 631
- Biliverdin**  
isomers of, and C10-substituted products, hepatobiliary excretion in Mrp2-deficient (TR)<sup>−</sup> rats, **293**, 1077
- Binding energy**  
and activation energy, of trypsin-catalyzed hydrolysis of oligopeptides, **290**, 494
- Binding symmetry**  
extracellular divalent cations to conduction pore, analysis with tandem dimers of CNG channel, **298**, 478
- Biodegradable polymer scaffolds**  
bone formation on, adenoviral BMP-2 gene transfer for, **292**, 144
- Biodegradation**  
carbazole in petroleum, *Spingomonas* sp. GTIN11 capable of, isolation and characterization, **297**, 242
- Bioinformatics**  
absence of evidence for arylamine *N*-acetyltransferase lateral gene transfer from bacteria to vertebrates, **293**, 783  
identification of biomarkers of human skin cells, **291**, 1052  
related dipeptide and characteristic dipeptide of optimal pH in  $\alpha$ -amylase, **299**, 647
- Biological probes**  
for study of cellular fate of endogenous proteins, use of chimeric proteins for, **290**, 332
- Biological systems**  
systems approach to evolution, editorial, **297**, 689
- Bioluminescence**  
bacterial, role of RpoS, **293**, 456  
generation of thermostable monomeric luciferases from *Photorhabdus luminescens*, **296**, 1072  
squid photoprotein with sequence similarity to mammalian carbon-nitrogen hydrolase domains, **293**, 874
- Biomarkers**  
constitutive expression of immunoidentical forms of pentachlorophenol-induced *Euglena* CYP-450, **298**, 277  
protein, identification with SELDI-TOF MS, **292**, 587
- Biopsy**  
fine needle aspirate, gene expression in, analysis by multiplex standardized RT-PCR, **293**, 509
- 6-Biopterin**  
photooxidation in vitiligo: production of H<sub>2</sub>O<sub>2</sub> and pterin-6-carboxylic acid, **292**, 805
- Biosensor**  
optical solid-state glucose sensor using immobilized glucose oxidase, **296**, 1069
- Biotin**  
linking to coenzyme A to form bisubstrate analog inhibitor of carboxylesterase component of acetyl-CoA carboxylase, **291**, 1213
- Biotinidase**  
mammalian, carbon-nitrogen hydrolase domains, squid photoprotein with sequence similarity to, **293**, 874
- BiP**  
expression, enhancement by continuous heat stress at level of translation, **297**, 224
- Biphenyl-2,3-diol 1,2-dioxygenase**  
steroid-inducible, identification of *Comamonas testosteroni* gene encoding, **294**, 560
- Biphenyl sulfamate**  
derivatives of compounds based on, design, synthesis, and evaluation as estrone sulfatase inhibitors, **294**, 180
- Bisphenol A**  
induction of ovarian granulosa cell apoptosis and G2/M arrest, **292**, 456  
serum levels, gender differences, **291**, 76  
thyroid hormone-disrupting activity, **293**, 554
- Bisphosphonates**  
NE21650, inhibition of isopentenyl diphosphate isomerase and farnesyl diphosphate synthase, **290**, 869
- Bladder carcinoma**  
NBT-II, behavior, role of gap junctional cell-cell communication, **294**, 108
- Blasticidin-S deaminase**  
*Aspergillus terreus*, structure/function of flexible C-terminal region, **290**, 421
- Bleomycin**  
pulmonary fibrosis induced by, Smad3 expression in, regulation by negative feedback loop of TGF- $\beta$  signaling, **294**, 319
- Bloch, Konrad (Special Issue)**  
bacterial fatty acid synthesis, **292**, 1155  
cholesterol, hydroxycholesterols, and bile acids, **292**, 1147  
direct hydration of 3-octynoyl-CoA by crotonase, **292**, 1171  
*Euglena* mystery, aerobic desaturation, **292**, 1239  
evolution and RNA world, **292**, 1267  
first step of oxygenation in cholesterol biosynthesis, **292**, 1283  
insects, oxygen, and iron, **292**, 1191  
lipids, **292**, 1255, 1279  
membrane-bound enzymes of cholesterol synthesis from lanosterol, **292**, 1139  
membrane-bound lecithin-retinol acyltransferase, **292**, 1243  
molecular biology in lipid lab in 1960s, amino acid activation for protein synthesis, **292**, 1231  
pioneer in cholesterol and fatty acid biosynthesis, **292**, 1117  
postdoctoral work with Konrad Bloch, **292**, 1209  
publications of Konrad Bloch, **292**, 1121  
regulation of cholesterol biosynthesis, **292**, 1227  
remembrances  
Babior, **292**, 1237  
Baldwin, **292**, 1197  
Clark, **292**, 1187  
Clayton, **292**, 1179  
Fulco, **292**, 1221  
Helmkamp, **292**, 1251  
Pearlman, **292**, 1231  
Raetz, **292**, 1167  
Zabin, **292**, 1175  
squalene synthase, **292**, 1261; *erratum*, **295**, 572  
sterol biosynthesis, the early days, **292**, 1129  
sterols and acylated proteins in mycoplasmas, **292**, 1289  
stimulating factor for fatty acid biosynthesis, **292**, 1273  
supernatant protein relevant to membrane-bound enzymes: lathosterol 5-desaturase, **292**, 1293  
from unsaturated fatty acids to lipid polymorphism, **292**, 1201  
yeast hydroxy fatty acids and fungal polyketides, **292**, 1213
- Blood**  
glucose levels in ob/ob and db/db mice, effects of acute and chronic treatment with AICAR, **294**, 798  
whole, tumor necrosis factor  $\alpha$  production in cultures from healthy individuals, **292**, 538
- Blood-brain barrier**  
maturation, regulation by oxygen tension, **290**, 325  
multidrug resistance protein identification, **293**, 1273  
opening, synergistic effects of cold mannitol and Na<sup>+</sup>/Ca<sup>2+</sup> exchange blocker, **291**, 669
- Blood pressure, see also Hypertension**  
relationship to polymorphism in exon 4 of 3 $\beta$ -hydroxysteroid dehydrogenase type I gene, **293**, 629
- Blood substitutes**  
atomic structure of human methemalbumin at 1.9 Å, **291**, 813
- B lymphoma cells**  
early apoptosis signaling induced by anti-Fas antibody or FasL, role of actin cytoskeleton (A20 cells), **290**, 268

- BMAL1**  
mRNA, entrainable expression in heart of *Clock* mutant mice on Jcl:ICR background, **298**, 198  
negative autoregulation and upregulation by CRY1, CRY2, and PER2, **290**, 933
- BNP1350**  
cellular resistance to, relationship to chk1 signaling pathways mediating G<sub>2</sub>M checkpoint, **295**, 435
- BNPI**  
associated vesicular constituents, release of glutamate, facilitation by ionotropic glutamate receptors in osteoblasts, **297**, 452
- Bombesin receptor**  
subtype 3, adipose tissue of mice deficient in, *Urb* gene upregulated in, cloning, expression, and mapping, **290**, 1282
- Bone**  
formation  
on biodegradable polymer scaffolds, adenoviral BMP-2 gene transfer for, **292**, 144  
effect of transgenic EXT gene expression in developing chondrocytes (mouse), **292**, 999  
in vivo  
by adenovirus-mediated direct transfer of BMP-4 gene, **298**, 121  
BMP-2-induced, stimulation by T-614, **299**, 903  
on PLA scaffolds by immunoselected adenoviral genetically modified human osteoprogenitors, **299**, 208  
mechanical loading, fluid flow generated by, induction of COX-2 expression in MC3T3-E1 osteoblasts via PKA signaling pathway, **297**, 46  
mineralization regulation, role of proteoglycans and components, **292**, 727  
postnatal development, effects of pleiotropin targeted overexpression, **298**, 324  
repair, enhancement with helper-dependent adenoviral transfer of BMP-2, **297**, 523  
tissue engineering, review, **292**, 1
- Bone cancer**  
spontaneous, in pet dog, role of angiostatin, **292**, 886
- Bone cells**  
1,25-dihydroxyvitamin D<sub>3</sub> receptor expression and response in, regulation by estrogens, **299**, 446
- Bone marrow**  
hepatocytes derived from, induction of, culture conditions enhancing, **298**, 24
- Bone marrow cells**  
helper-dependent adenoviral transfer of BMP-2 into, for enhancement of bone repair, **297**, 523
- Bone marrow stromal cells**  
bone morphogenetic protein-4 gene expression, enhancement by phosphate depletion (ST2 cells), **299**, 395  
FGF-2-induced increase of colony formation and PTH recombinant and IGF-1 mRNA, **290**, 526
- Bone matrix powder**  
heterotopic chondro-osteogenesis induced by, effect of basic fibroblast growth factor, **293**, 680
- Bone morphogenetic protein**  
signaling, response to, role of Smad motif similar to *Drosophila* Mad, **291**, 655
- Bone morphogenetic protein-2**  
adenoviral gene transfer in mesenchymal stem cells, **292**, 144  
expression in human osteoprogenitors after adenoviral transfer, for formation of bone in vivo on PLA scaffolds, **299**, 208  
helper-dependent adenoviral transfer, enhancement of bone repair with, **297**, 523  
induction of bone formation in vivo, stimulation by T-614, **299**, 903  
upregulation of Erk2 gene expression, role of Sp1, **297**, 116
- Bone morphogenetic protein-4**  
adenovirus-mediated direct gene transfer, induction of bone formation in vivo, **298**, 121  
expression in epithelium-derived components of hair follicles, promoter control modules directing, **293**, 1412  
gene expression in cultured mouse marrow stromal ST2 cells, enhancement by phosphate depletion, **299**, 395  
Xbr-1a/Xvent-2 homeobox gene promoter region sensitive to, analysis, **298**, 815
- Bone resorption**  
osteoclast activity for, reduction in vitro by lactoferrin, **296**, 261  
by osteoclasts, intracellular membrane trafficking pathways in, **293**, 1060
- Boswellic acids**  
activation of p42<sup>MAPK</sup> and p38 MAPK and stimulation of Ca<sup>2+</sup> mobilization in isolated PMNL, **290**, 185
- Botrytis cinerea**  
*PLS1*-related tetraspanin gene identification, **297**, 1197
- Botulinum toxin complex**  
nontoxic-nonhemagglutinin component, spontaneous nicking (*Clostridium botulinum*), **292**, 434
- Bovine serum albumin**  
[Cys<sup>5</sup>] $\mu$ -conotoxin GIIIA immunogen site-specifically conjugated with, generation of GIIIA antibodies using, **290**, 1037  
human B and T cell epitopes, **293**, 1348  
labeled, resonance energy transfer in, effects of metallic silver particles, **294**, 886  
priming with, effect on  $\gamma\delta$  T cells in buccal epithelium (mouse), **294**, 626
- Bovine viral diarrhea virus**  
envelope glycoproteins, folding and assembly, role of disulfide bond formation, **296**, 470
- Bradykinin**  
induction of calcium-dependent oxidation of thioredoxin, **290**, 624
- BRAF25**  
alternatively spliced  
cDNA cloning and detection in prostate cancer cells, **295**, 129  
immunohistological detection in human prostate tumor and cancer specimens, **295**, 136
- Brain**  
 $\alpha$ -actinin 1 mRNA brain-specific splicing, **295**, 678  
acyl-CoA hydrolase isoforms encoded by single gene (human), **299**, 49  
BACE1 splice variants, identification (human), **293**, 30  
capillary endothelial cells, FGF-2-mediated tube-like structure formation, role of c-Fyn (mouse), **290**, 1354  
cytochrome P450 4X1 specific to, identification (rat), **296**, 677  
expression of murine BTB/POZ zinc finger gene *Znf131*, **296**, 319  
expression of potassium channel mRNAs with AU-rich elements, **291**, 1265  
expression of vertebrate ancient opsins Pal-VAM and Pal-VAL (smelt), **290**, 280  
fetal Down syndrome  
aberrant expression of contractin and capping proteins, **291**, 62  
reduction of actin-related protein complex 2/3 in, **293**, 836  
Fly-like putative transporters homologous to *Drosophila* Orct and mammalian OCTNs (human), **297**, 1159  
gonadotropin-releasing hormone-like peptide isolation and expression (*Octopus vulgaris*), **291**, 1187  
 [<sup>35</sup>S]GTP $\gamma$ S binding in homogenate, stimulation by hypocretin, **294**, 615  
hydrogen sulfide levels, decrease in Alzheimer's disease, **293**, 1485  
immunoglobulin superfamily gene preferentially expressed by, molecular cloning, **296**, 1215  
interleukin-1 receptor antagonist expression, induction by leptin, **294**, 215  
ischemic injury, protection by recombinant adenoviral expression of dominant negative IkB $\alpha$ , **299**, 14



- kainic acid-induced responses, role of *rgpr85* encoding G protein-coupled receptor (adult rat), **298**, 613
- leptin receptor expression, relationship to obesity in bilateral ovariectomized rat, **290**, 1349
- lipid rafts isolated from, association with tenascins (mouse), **294**, 742
- nitric-oxide synthase increase in SAMP10, promotion of Bcl-2-linked apoptosis, **297**, 517
- nuclear actin-related protein ArpN $\alpha$  expression, **299**, 328
- nucleoside diphosphate kinase activity, decrease in Alzheimer's disease and Down syndrome (human), **296**, 970
- PACAP and homologous *Drosophila* memory gene *amnesiac*, functions, **297**, 427
- particulate fraction, constitutive nitric-oxide synthase in, activation by superoxide, **296**, 413
- prion protein-like expression (*Fugu rubripes*), **294**, 912
- <sup>125</sup>I-secretin receptor binding sites, in vitro autoradiographic localization (rat), **292**, 133
- and testis, 3'-phosphoinositide-dependent protein kinase-1 isoform mPDK-1 $\beta$  specific to, cloning and characterization, **294**, 136
- Urb* gene expression in bombesin receptor subtype-3-deficient mice, **290**, 1282
- Brain-derived cell line
- TE671, thyroid hormone-induced transactivation, suppression by polychlorinated biphenyls, **299**, 384
- Brain-derived endothelial cells
- vascular endothelial growth factor and VEGF receptor levels, **293**, 710
- Brain-derived neurotrophic factor
- binding to TrkB receptor, site for, localization to discrete receptor domain, **291**, 501
- gene promoter activation, REST4-mediated modulation of REST/NRSF-silencing function during, **290**, 415
- promotion of Nck2 adaptor protein interaction with TrkB tyrosine kinase receptor, **294**, 1087
- Brain mitochondrial carrier protein-1
- role in pathophysiological states, review, **293**, 1145
- Brain multidrug resistance protein
- at blood-brain barrier, identification, **293**, 1273
- Brain tumor cells
- hypocrellin-A and -B photodynamic therapy, effects on release of angiogenesis regulators (human), **298**, 520
- Branched-chain amino acids
- effect on hepatocyte growth factor secretion by hepatic stellate cells, **297**, 1108
- BRCA1
- genes induced by, identification in breast cancer cells, **299**, 839
- ring finger domain, engineered ubiquitin ligase with, targeted substrate degradation by, **295**, 370
- BRCA2-associated factor 35
- alternatively spliced protein, cDNA cloning, **295**, 129
- BRCA2 complex
- BRCA2-associated factor 35, alternatively spliced protein BRAF25 cDNA cloning, **295**, 129
- immunohistological detection in human prostate tumor and cancer specimens, **295**, 136
- Breast cancer
- ductal, progression of, association with RCAS1, **293**, 1544
- homeodomain-interacting protein kinase 2 gene expression, **290**, 942
- male and female, gelatinase levels in, **292**, 161
- maspin gene silencing in, by DNA hypermethylation and histone deacetylation, **297**, 125
- Breast cancer cells
- anti-apoptotic effect of neurotensin, **295**, 482
- apoptosis
- induction by IGFBP-3 N-terminal region (MCF-7 cells), **293**, 55
- induction by lipoxygenase inhibitors, mechanisms, **296**, 942
- relationship to Mcl-1 isoforms, p21WAF1/cyclin A ratio, and Jun kinase phosphorylation (MCF-7 cells), **297**, 943
- benzo(a)pyrene-induced p53 from, detection in immunoblotting, anti-p53 antibodies for, comparison (MCF-7 cells), **293**, 850
- BRCA1-induced genes in, identification (MCF-7 cells), **299**, 839
- cell death in, effects of non-IGF binding mutant of IGFBP-5 (Hs578T, MCF-7 cells), **294**, 995
- c-fos* gene expression, regulation by estrogen via PI-3-kinase-dependent activation of serum response factor (MCF-7 cells), **294**, 384
- estrogen exposure, secreted WISP-2 as marker (MCF-7 cells), **294**, 602
- fatty acid synthase inhibition in, associated malonyl-CoA-induced inhibition of fatty acid oxidation and cytotoxicity, **285**, 217; *erratum*, **295**, 570
- growth in vitro and in vivo, effect of resveratrol (4T1 cells), **291**, 1001
- highly invasive, motility of, suppression by *Ganoderma lucidum* (MDA-MB-231 cells), **298**, 603
- HSP70 synthesis and sensitivity to hyperthermia, effect of dominant-negative mutant of HSF1 (Bcap37 cells), **290**, 1454
- insulin and IGF-I effects, inhibition by dominant negative  $\alpha$  subunit of farnesyltransferase (MCF-7 cells), **291**, 458
- maspin tyrosine phosphorylation in, **295**, 800
- matrix metalloproteinase-9 secretion, induction by FGF-2 and TPA by PKC activation of Ras/ERK pathway (MCF-7 cells), **293**, 1174
- motility, induction by PKC by upregulation of u-plasminogen activator secretion, mechanism (MDA-MB-231), **290**, 552
- paclitaxel-resistant, levels of tyrosinated  $\alpha$ -,  $\beta_{III}$ -, and  $\beta_{IV}$ -tubulin isotypes (MCF-7 cells), **293**, 598
- proliferation, inhibition by Wilms' tumor 1 protein downregulation, **295**, 784
- proliferative response to leptin (MCF-7 cells), **293**, 622
- sensitization to cisplatin by recombinant adenovirus-mediated p14<sup>ARF</sup> overexpression, **296**, 792
- stearoyl-CoA desaturase inhibition by *cis*-9,*trans*-11 and *trans*-10,*cis*-12 isomers of conjugated linoleic acid (MCF-7, MDA-MB-231 cells), **294**, 785
- transcriptional activity of hGH promoter constructs in, effect of 1,25-dihydroxyvitamin D<sub>3</sub> treatment (MCF-7 cells), **292**, 250
- Breast cancer resistance protein
- porcine brain multidrug resistance protein related to, identification at blood-brain barrier, **293**, 1273
- Breast epithelial cells
- cell function, modulation by non-IGF binding mutant of IGFBP-3 (Hs578T, MCF-7, MCF-10A cells), **294**, 988
- cholinephosphotransferase expression (MCF-12A cells), **297**, 1043
- MUC1 metabolic complex formation (HMEC cells), **293**, 1183
- Breast neoplasia
- homeodomain-interacting protein kinase 2 gene expression (human), **290**, 942
- Brefeldin A
- differential effects on palmitoylation of surfactant protein C proprotein mutants, **290**, 532
- prosomatostatin N-glycosylation induced in AtT20 cells by, **296**, 618
- Brevinin-1 family
- antimicrobial peptides in *Rana tarahumarae* skin, inhibition of chytrid fungus growth in vitro, **297**, 361
- Brn-3a
- functional interaction with Src-1: co-activation of Brn-3a-mediated transactivation, **294**, 487
- Bronchioles
- anti-inflammatory activity and bronchodilator effect of NO-steroids (guinea pig), **290**, 125
- Bronchodilation
- by NO-steroids, **290**, 125



- Brownian motion  
and processive movement of class VI myosin along actin filaments backward with large steps, **290**, 311
- Brush border membrane  
cholesterol uptake, regulation by biliary anionic peptide fraction and ApoA-I, **292**, 390  
duodenal, cytochrome *b*<sub>558</sub> ferric/cupric reductase from, characterization (rabbit), **291**, 220
- Bruton's tyrosine kinase  
interaction with Akt in B cell signaling, **293**, 1319  
phosphorylation by c-Abl, **299**, 510
- BTB/POZ domain  
Znf131 with, expression in developing central nervous system and adult brain, testis, and thymus, **296**, 319
- Btk, *see* Bruton's tyrosine kinase
- BubR1  
interaction with  $\beta$ 2-adaptin clathrin adaptor, **298**, 720
- Buccal epithelium  
 $\gamma\delta$  T cells in, effect of antigen priming (mouse), **294**, 626
- Buchnera* sp. APS  
orphan genes, experimental validation, **292**, 263
- BUD32  
yeast, acidophilic character, **296**, 1366
- Burkitt's lymphoma cells  
c-myc suppression (Ramos cells), **290**, 11
- Buthionine sulfoximine  
enhancement of arsenic trioxide-induced apoptosis in hepatocellular carcinoma cell lines, **291**, 861
- N*-Butyldeoxynojirimycin  
endoplasmic reticulum-targeted delivery to melanoma cells by pH-sensitive liposomes, **293**, 918
- tert*-Butyl hydroperoxide  
induction of biphasic oxidation of mitochondrial NAD(P)H, **291**, 170
- Butyrate  
reduction of colonic paracellular permeability by enhancement of PPAR $\gamma$  activation, **293**, 827  
transport in colon, monocarboxylate transporter MCT1 involved in, genomic organization and promoter analysis (human), **292**, 1048
- Butyrylcholinesterase  
involvement in early development of brine shrimp larvae and targeting in phthalate ester embryotoxicity, **299**, 659
- C
- Cot* analysis  
revised theory of DNA renaturation and experimental verification, **293**, 870
- C1 inhibitor gene  
GAS 4, IFN- $\gamma$ -mediated nuclear STAT1 binding to, downregulation of, role of phosphatases and proteasome, **299**, 574
- C1-TEN  
interaction with Ax1 receptor tyrosine kinase, **299**, 793
- C2 domain  
Nedd4 protein WWP1, effect of alternative splicing, **290**, 431
- C6orf37* gene  
on chromosome 6q14, identification and characterization, **293**, 356
- Ca<sup>2+</sup>-ATPase  
function in cardiac muscle, depression by lack of nitric oxide synthase, **294**, 1030
- c-Abl  
phosphorylation of Bruton's tyrosine kinase, **299**, 510
- Ca<sup>2+</sup>/calmodulin  
sensitivity of inositol 1,4,5-trisphosphate 3-kinase B in human, **291**, 400
- Ca<sup>2+</sup>/calmodulin-dependent protein kinase  
cardiac sarcoplasmic reticulum, inhibition by Ca<sup>2+</sup> overload, **293**, 727
- Ca<sup>2+</sup>/calmodulin-dependent protein kinase II  
dynamics after acute myocardial ischemia (rat), **297**, 997  
protein substrates, identification in postsynaptic density, **290**, 948
- Ca<sup>2+</sup>/cAMP response element  
promoter, phase-gated induction by glutamate in immortalized suprachiasmatic nucleus cell line, **298**, 133
- Cachexia  
muscle, molecular regulation, review, **290**, 1  
role in pathophysiological states, review, **293**, 1145
- Ca<sup>2+</sup>-dependent protein kinase  
components downstream of RuBisCO activase, role in gibberellin signaling, **290**, 690
- Cadherin  
human uterine RL95-2 cell, effects of benzo[a]pyrene and TCDD, **294**, 101
- E-Cadherin  
colon epithelial HT-29 cell polarity dependent on, stimulation by CAS/CSE 1, **294**, 900
- Cadherin domains  
multiple, identification in fat3, **290**, 1260
- Cadmium  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653  
oxidative injury to vascular smooth muscle cells by, protective effect of chemically induced cellular antioxidants, **292**, 50; *erratum*, **294**, 1192  
role in imide hydrolysis (pig), **297**, 1027
- CAGE  
identification and characterization: cancer/testis antigen gene, **292**, 715
- Calcemic effect  
low, antiproliferative and prodifferentiating vitamin D analog ZK 156718 with, **290**, 504
- Calcitonin  
induction of uPA and NF-IL3A in LLC-PK1 cells, role of Erk1/2 phosphorylation, **290**, 1483  
secretion in medullary thyroid carcinoma cells, effect of somatostatin receptor subtype 1 (human), **297**, 828
- Calcium  
actin depolymerization induced by, modulation by CD-31, **292**, 1092  
Ca<sup>2+</sup>/calmodulin-mediated cellular process, role of Ras-like protein Rin, **295**, 651  
extra- and intracellular, role in CREB DNA binding activation by 50-Hz magnetic field, **296**, 1013  
fluxes, inducing potencies of motilin pharmacophore in CHO cells expressing human motilin receptor, **293**, 1223  
influx in cholinergic basal forebrain neurons, inhibition of, mediation by TGF- $\beta$ 2, **290**, 1321  
intracellular  
AMPA-induced increase in hippocampal neurons, attenuation by (-)-epigallocatechin gallate, **290**, 1506  
and calpain role in microcystin-induced apoptosis in rat hepatocytes, **291**, 321  
elevation in cultured epidermal keratinocytes via vanilloid receptor subtype 1, **291**, 124  
in erythrocytes, increase by arachidonic acid, **293**, 974  
levels in cultured chick myoblasts, effects of hyperpolarization and depolarization, **290**, 1176  
metabolism by creatine kinase in myocardium (mouse), **298**, 163  
modulation via  $\alpha_{1B}$ -adrenoreceptor signaling molecules G $\alpha_h$  and phospholipase C- $\delta$ 1, **293**, 383  
role in thrombin-stimulated Pyk phosphorylation in human endothelium, **294**, 1001  
ryanodine receptor-dependent elevation by ligand-dependent activation of melanocortin 5 receptor, **290**, 844  
levels in hippocampal neurons, NMDA receptor-mediated changes, effects of ginsenosides (rat), **296**, 247

- 5-lipoxygenase dependence on, conferral by monocyte-derived soluble protein, **295**, 985
- luminal and extravesicular, effect on NAADP binding and release properties, **295**, 806
- mobilization  
in isolated PMNL, stimulation by boswellic acids, **290**, 185  
mediated by prostaglandin E receptor EP<sub>1</sub> in oocytes, mechanism (*Xenopus laevis*), **298**, 398
- oscillations  
frequency in histamine-stimulated endothelial cells, regulation by phospholipase D (human), **292**, 325  
in mouse egg, flowering plant sperm triggering, cytosolic soluble protein factor from, **287**, 56; *erratum*, **290**, 613
- osmotic resistance of high-density erythrocytes in transglutaminase 2-deficient mice, **291**, 1123
- overload, inhibition of cardiac sarcoplasmic reticulum Ca<sup>2+</sup>-calmodulin protein kinase activity, **293**, 727
- regulation of DNA chain unwinding and annealing activities of lipocortin I heterotetramer, **291**, 205
- regulation of type III inositol 1,4,5-trisphosphate receptor, **294**, 719
- response to cyclic ADP-ribose during maturation and fertilization of starfish oocytes, **290**, 1015
- role in ALG-2 interaction with annexin XI N-terminal domain, **291**, 1166
- role in metabolic responses induced by thrombin in human umbilical vein endothelial cells, **293**, 979
- role in nociceptin/orphanin FQ-induced phosphorylation of CREB and MAPK in dopaminergic SH-SY5Y cells, **291**, 663
- role in tributyltin-induced cytochrome *c* release from isolated mitochondria, **292**, 904
- store-mediated entry into glioma C6 cells, role of actin cytoskeleton, **296**, 484
- thioredoxin oxidation dependent on, during cellular growth initiation, **290**, 624
- visinin-like protein-1 EF-hand motifs binding to, functional analysis, **296**, 827
- Calcium-binding proteins  
cysteine-rich S100A3 from hair cuticles, characterization (human), **299**, 857  
EF-hand protein calcyphosine 2, gene cloning, characterization, and expression (human), **291**, 414  
intracellular sensors from calmodulin superfamily, **290**, 615  
S100A5, restricted expression in kidney (human), **291**, 623
- Calcium channels  
accumulation in cultured calvarial osteoblasts, effects of GABA<sub>B</sub> receptor agonist, **293**, 1445  
in CA1 hippocampal neurons, acute effects of Aβ(25–35) and Aβ(1–40), **296**, 1317  
Ca<sub>v</sub>2.2, modulation by direct action of tyrosine kinase on α<sub>1</sub> subunit, **290**, 1246  
Ca<sub>v</sub>2.3 (α<sub>1E</sub>), mice lacking, altered cocaine effects in, **299**, 299  
epithelial, rapid inactivation caused by single amino acid mutation, **291**, 278
- L-type  
cardiac Ca<sub>v</sub>1.2, promoter for α<sub>1C</sub> subunit of, **296**, 429  
cardiac-specific β-subunit sequestration (mouse), **293**, 1405  
nerve growth factor-gated, M6a action in neuronal differentiation (PC12 cells), **297**, 722  
regulation by cardiac ryanodine receptor, critical domain in, peptide probe study, **291**, 1102  
RyR2, binding to FKBP12.6, effects of ARVD2 and VTSIP mutations, **299**, 594  
single channel upregulation in neurons by serotonin, mechanisms (*Helix pomatia*), **293**, 132
- T-type Ca<sub>v</sub>, targeting by scorpion toxins kurtosin-like I and II, **299**, 562
- vanilloid receptor-1 function, effects of thapsigargin, **293**, 777
- Calcium oxalate nephrolithiasis  
differentially expressed genes during progression of, global analysis, **296**, 544
- Calcium pyrophosphate dihydrate  
effect on neutrophil adherence to human osteoblasts, **296**, 759
- Calcium release channel  
RyR1, stimulation by ADP-ribose in rat skeletal muscle, **296**, 1267
- Calcium-sensing receptor  
extracellular, expression in myeloma cells and modulation of cell proliferation, **299**, 532  
pH-sensitive activation, induction by aminoglycoside antibiotics, **297**, 71
- Calcium signaling  
associated with *Drosophila melanogaster* sulfakinin receptor DSK-R1, role of G proteins, **291**, 313  
C-terminus of Gi family of G proteins as determinant of 5-HT<sub>1A</sub> receptor coupling, **294**, 655  
glycosylphosphatidylinositol-anchored GFP, and homogeneous distribution on cell surface, **293**, 714  
in Pmr1-GFP-expressing COS-1 cells with functional endoplasmic reticulum, **294**, 249  
in retina, **290**, 615  
signal upstream of cytochrome *c* release, detection during apoptosis in HeLa cells, **299**, 762  
in *Trypanosoma cruzi*, elevation by synthetic peptide carrying residues 1–40 of chicken α<sup>D</sup>-globin, **293**, 314
- Calcium transients  
poorly synchronized, novel type, generation by insulin-secreting INS-1 cells, **293**, 842
- Calcyphosine 2 gene  
encoding EF-hand Ca<sup>2+</sup>-binding protein, cloning, characterization, and expression (human), **291**, 414
- Callus  
formation, cytokinin responses in, effects of overexpression of *Arabidopsis* response regulators ARR4 and ARR8, **293**, 806
- Calmodulin  
anchoring sites on SSeCKS, **290**, 1368  
Ca<sup>2+</sup>/calmodulin-mediated cellular process, role of Ras-like protein Rin, **295**, 651  
calcium-binding proteins resembling, role as intracellular sensors, **290**, 615  
interaction with protein serine/threonine phosphatases with EF-hand domains, **293**, 1047  
p85 G-actin binding dependent on, regulation of cytokinesis initiation in *Tetrahymena*, **292**, 1098  
regulation of hypotonicity-induced translocation of ENaC in renal epithelial A6 cells dependent on, **298**, 619
- Calmodulin-dependent protein kinase III  
antibodies to, detection in systemic lupus erythematosus patients, **293**, 1073
- Calpain  
activation after mitochondrial permeability transition in microcystin-induced cell death in rat hepatocytes, **291**, 321  
cleavage of p35 to p25, effect on tau hyperphosphorylation, **298**, 693  
relationship to MMP-2 and u-PA expression in SV40 large T-antigen-immortalized cells, **297**, 294  
tissue-specific, regulation in anterior pituitary by estrogen, **295**, 261
- Calpain II  
colocalization with detergent-insoluble rafts on human and Jurkat T cells, **295**, 540
- Calpastatin  
regulation of transformed state via PKCε in NIH3T3 fibroblasts, **290**, 510
- Calyculin A  
prevention of Bax translocation to mitochondria during apoptosis, **291**, 1258



- Camptothecin  
apoptosis induced by, role in ceramide accumulation in prostate cancer LNCaP cells, **294**, 363  
inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334
- L-Canavanine  
induction of Jurkat cell apoptosis via caspase-3 activation regulated by Bcl-2 or Bcl-xL, **295**, 283
- Cancer  
chemoprevention, implications of aspirin inhibition of oxidative DNA strand breaks, **293**, 705  
prognosis, paradoxical relationship of hypoxia and angiogenesis in, **299**, 676  
 $\alpha$ -tocopheryl succinate activity against, dependence on pro-vitamin-to-vitamin conversion, **293**, 1309
- Cancer cells  
interferon  $\gamma$  efficacy in vivo, effect of adenovirus-mediated transfer of murine IFN- $\gamma$  receptor, **290**, 1042  
invasion by,  $\beta$ 1,3-*N*-acetylglucosaminyltransferase involved in, **294**, 843
- Cancer/testis antigen gene  
*CAGE*, identification and characterization, **292**, 715
- Cancer therapy  
cell cycle-dependent regulation of CNT1, **296**, 575
- Candida albicans*  
antifungal mechanism of peptide HP (2–20) from *Helicobacter pylori* ribosomal protein L1 N-terminus, **291**, 1006  
plasma membrane, effect of HP (2–9)-magainin 2 (1–12) hybrid peptide, **297**, 885  
secreted aspartic protease of, inhibition by peptidomimetic series active on HIV-1 protease, **297**, 1350
- Cannabinoid receptor  
CB2, lymphocyte expression of, autocrine and paracrine regulation by TGF- $\beta$ , **290**, 91  
non-adenylyl cyclase-coupled, in mouse cerebellum, **292**, 231
- capa-1  
*Drosophila* receptor for, molecular cloning and functional expression, **299**, 628
- capa-2  
*Drosophila* receptor for, molecular cloning and functional expression, **299**, 628
- Capillary endothelial cells  
in brain, FGF-2-mediated tube-like structure formation, role of c-Fyn (mouse), **290**, 1354
- Capping activity  
recombinant RNA polymerase of vesicular stomatitis virus, **293**, 264
- Capping proteins  
aberrant expression in fetal Down syndrome brain, **291**, 62
- Capsaicin  
associated  $\text{Ca}^{2+}$  uptake and elevation, effects of thapsigargin, **293**, 777  
elevation of intracellular  $\text{Ca}^{2+}$  in cultured epidermal keratinocytes via vanilloid receptor subtype 1, **291**, 124
- Captopril  
and angiotensin II, effects on dendritic cells, **296**, 194
- CAR  
repression in liver during acute phase response, associated reduction of cytochrome P450 expression (mouse), **293**, 145
- N*-Carbamoyl D-amino acid amidohydrolase  
oxidative resistance, effect of engineering solvent-accessible Met residues (*Agrobacterium radiobacter*), **297**, 282
- Carbaryl  
catalytic antibody therapy against, **291**, 605
- Carbazole  
metabolism in petroleum, *Sphingomonas* sp. GTIN11 capable of, isolation and characterization, **297**, 242
- Carbohydrates  
complex, agglutinin efficiently binding to, isolation from edible mushroom *Lyophyllum shimeiji* fruiting bodies, **290**, 563  
diet high in, effects on circulating levels of ghrelin (rat), **292**, 1031
- Carbon  
sources of, regulation of *GDH1* expression, **293**, 79
- Carbon dioxide  
production in discs excised from zucchini and subjected to chilling injury, effects of peptic oligomers, **290**, 577
- Carbonic anhydrase  
aggregation, effects of phage display-selected aggregate-binding peptides (bovine), **291**, 903  
amorphous aggregates, structural organization and conformational plasticity in, analysis with hydrophobic dye, **293**, 572
- Carbon monoxide  
hemoglobin affinity for, increase at low oxygen fractions, **295**, 975
- Carbonmonoxyhemoglobin  
interaction with small unilamellar lipid vesicles of uniform size, **296**, 1352
- Carbon–nitrogen hydrolase domains  
mammalian, squid photoprotein with sequence similarity to, **293**, 874
- Carbon tetrachloride  
induction of early-phase hepatic fibrogenesis, prevention by pioglitazone, **291**, 55
- Carbonyl cyanide *m*-chlorophenylhydrazone  
restoration of antibiotic susceptibility to resistant *Enterobacter aerogenes* strains, **293**, 1370
- Carboxyhemoglobin difference  
arteriovenous, in critical illness, **299**, 479
- Carboxyltransferase  
component of acetyl-CoA carboxylase, bisubstrate analog inhibitor of, **291**, 1213
- Carboxymethyl-cellulose  
hydrolysis by Cel5Z from *Pectobacterium chrysanthemi* PY35, enhancement by partial C-terminal domain removal, **291**, 425
- N*<sup>ε</sup>-(Carboxymethyl)lysine  
induction of  $\gamma$ -glutamylcysteine synthetase in RAW264.7 cells, **296**, 32
- Carcinoembryonic antigen associated cell adhesion molecule-1  
secreted splice variants in rat cell lines and in vivo in serum, **292**, 749
- Carcinoembryonic antigen associated cell adhesion molecule-6  
gene expression in pancreatic cancer cells, differential display study, **293**, 391
- Carcinogenesis  
colorectal, genes regulating, identification with algorithm for diagnosing malignant state, **296**, 497  
implication of serum-induced increase in CYP1A1 induction by 3-methylcholanthrene, **297**, 249  
role of catecholestrogen sulfation, **292**, 402  
role of homeodomain-interacting protein kinase 2 gene, **290**, 942
- Carcinogenicity  
picene and dibenz[*a,h*]anthracene in rat, comparison, **290**, 275
- Carcinogens  
food-borne, heterocyclic amines, editorial, **296**, 1037
- Cardiac ankyrin repeat protein  
augmentation in human heart failure, **293**, 1377
- Cardiac muscle  
fatty acid translocase/CD36 and GLUT4 localization in different cellular compartments (rat), **293**, 665  
ion-transporting enzyme function in, depression by lack of nitric oxide synthase, **294**, 1030
- Cardiac remodeling  
after myocardial infarction, role of heparin-binding epidermal growth factor-like growth factor, **297**, 375
- Cardiomyoblasts  
*Trypanosoma cruzi* adhesion to, role of 45-kDa mucin, **290**, 29



- ventricular, mitochondrial nitric oxide localization by confocal microscopy (H9c2 cells), **290**, 1010
- Cardiomyocytes
- differential heat shock protein response, induction by inhibition of ubiquitin–proteasome pathway, **291**, 542
  - dual effects of Csx/Nkx2–5 on, **298**, 493
  - hypertrophic growth, induction by expression of cyclin D1 and CDK4, implications for cardiac hypertrophy, **296**, 274
  - neonatal,  $G\alpha_q$ , signaling on  $\alpha$ -adrenoceptor stimulation in, counter-action by  $G\beta\gamma$  (rat), **291**, 995
- ventricular
- adult, acutely isolated and short-term cultured,  $Na^+/Ca^{2+}$  exchanger current and response to isoproterenol, **297**, 302
  - anionic background conductance  $I_{AB}$  in, modulation by tefluthrin (guinea pig), **292**, 208
- Cardiomyopathy
- dilated, *see* Dilated cardiomyopathy
- Carnitine palmitoyltransferase I
- induction by peroxisome proliferator, **299**, 832
  - inhibition by fatty acid synthase inhibition in breast cancer cells, **285**, 217; *erratum*, **295**, 570
- Carnitine transporters
- mammalian, and *Drosophila Orct*, human cDNAs homologous to, **297**, 1159
- Carnosine
- quenching of 4-hydroxy-nonenal, mechanism, **298**, 699
- Carotid artery
- morphology and function, relationship to single nucleotide polymorphism in osteoprotegerin gene promoter region (human), **293**, 13
- CARP
- CARD containing protein, identification, expression, and effects on apoptosis and proliferation, **293**, 1396
  - cardiac ankyrin repeat protein, augmentation in human heart failure, **293**, 1377
- Cartilage
- articular, cleavage of C5 domain of type VI collagen  $\alpha 3$  chain from Col6 fibrils after secretion, **290**, 743
  - osteoarthritic, enhanced chitinase 3-like 2 gene vs chitinase 3-like 1 gene expression (human), **299**, 109
  - regeneration, potential of adipose tissue-derived stromal cells for, in vitro and in vivo models, **290**, 763
- CAS/CSE 1
- stimulation of E-cadherin-dependent cell polarity in HT-29 colon epithelial cells, **294**, 900
- $\alpha 1$ -Casein gene
- rabbit, distal enhancer, effect on reporter gene expression, **290**, 53
- Casein kinase II, *see* Protein kinase CKII
- Caspase
- activation
    - during camptothecin-induced apoptosis in prostate cancer LNCaP cells, **294**, 363
    - in zinc-depleted airway epithelial cells, role of redox events (A549, NCI-H292 cells), **297**, 1062
  - assays in vitro and in vivo, discrepancy: mechanism reversibly inactivating pancaspase inhibitor zASP-CH<sub>2</sub>-DCB, **291**, 1022
  - cleavage of RNA polymerase II large subunit during DNA damage-induced apoptosis, **296**, 954
  - effects of inhibitor of apoptosis protein from *Trichoplusia ni*, **293**, 675
  - enhanced expression, and metal-catalyzed oxidation of ECM proteins and apoptosis promotion in mesangial cells, **292**, 652
  - role in induction of laryngeal cancer cell apoptosis by recombinant adenovirus encoding H-ras ribozyme, **298**, 805
  - substrate usage, species-specific differences, **297**, 1186
- Caspase-1
- pro-caspase-1 interaction with Nod1, enhancement of pro-interleukin-1 $\beta$  processing, **299**, 652
- Caspase-3
- activation
    - association with disruption of gastric mucin synthesis by *Helicobacter pylori* lipopolysaccharide, **294**, 220
    - in osteoclasts by hydroxyl radicals produced by Fenton reaction, **292**, 94
    - regulated by Bcl-2 or Bcl-xL, role in L-canavanine induction of Jurkat cell apoptosis, **295**, 283
  - active, expression during parturition in prostaglandin F receptor-deficient mice, **292**, 675
  - caspase-9/caspase-3 pathway, role in ceramide induction of neuronal apoptosis, **299**, 201
  - expression after exposure to power frequency magnetic fields in Ku80-deficient xrs5 cells, **292**, 355
- Caspase-6
- activation by mutated focal adhesion kinase in T98G glioma cells, **293**, 174
- Caspase-7
- nuclear transport, inhibition by its prodomain, **291**, 79
- Caspase-8
- death effector domain-only polypeptides, inhibition of death receptor-induced cell death, **291**, 484
  - gene transduction, effect on radiation-induced apoptosis in DLD-1 cells, **292**, 347
- Caspase-9/caspase-3 pathway
- role in ceramide induction of neuronal apoptosis, **299**, 201
- Caspase-10
- death effector domain-only polypeptides, inhibition of death receptor-induced cell death, **291**, 484
- Caspase-12
- acquired deleterious mutations, **293**, 722
- Caspase-14
- native, processing at atypical cleavage site in normal epidermal differentiation, **296**, 911
- Caspase-associated recruitment domain
- CARP protein containing, identification, expression, and effects on apoptosis and proliferation, **293**, 1396
- Caspase cascade
- blockade upstream of, suppression by Fas-resistant HTLV-I-infected T cells, **294**, 714
- Catalase
- chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192
  - skeletal muscle, inhibition by reactive nitrogen species donors, specificity, **294**, 1093
- Catalysis
- at pH 4.0, by *Aspergillus niger* NRRL 3135 phytase, enhancement by site-directed mutagenesis, **297**, 1016
  - or substrate binding, favoring by subsites of trypsin active site, **290**, 494
- Catalytic antibody therapy
- against carbaryl, **291**, 605
- Catechins
- green tea, interaction with and effects on export function of P-glycoprotein, **297**, 412
- Catecholamines
- biosynthesis, V-1 regulating, expression in atrial myocytes of Dahl salt-sensitive rat, enhancement by hypertension, **298**, 793
- Catecholestrogen
- sulfation, role in carcinogenesis, **292**, 402
- $\alpha$ -Catenin
- interaction with HIV-I gp41 leucine zipper domain, **291**, 1239

- $\beta$ -Catenin  
 human uterine RL95-2 cell, effects of benzo[a]pyrene and TCDD, **294**, 101  
 phosphorylation at GSK-3 priming site Ser45, **294**, 324  
 presenilin-mediated regulation, role of  $\gamma$ -secretase, **299**, 744  
 regulation of cyclooxygenase-2 expression in articular chondrocytes, **296**, 221  
 subcellular localization, regulation by cell density, **292**, 195
- $\beta$ -Catenin/Tcf activity  
 inhibition by white tea, green tea, and epigallocatechin-3-gallate, relationship to H<sub>2</sub>O<sub>2</sub> generation, **296**, 584
- Cathepsin K  
 expression in osteoclast cultures, regulation by osteoprotegerin, **293**, 38
- Cathepsins  
 placentally expressed, evolution, **293**, 23
- Cationic lipid  
 DOTAP, proteolipidic vectors for gene transfer to lung containing, **290**, 1489
- Cationic liposomes  
 intracellular trafficking of exogenous DNA delivered by, visualization, **298**, 591
- Caveolin  
 associated 29-kDa protein, Src family kinase-dependent phosphorylation, **290**, 1447
- Caveolin-1  
 interaction of protein-tyrosine phosphatases with, **296**, 692  
 interaction with SNARE in hippocampus, dependence on ATP, **291**, 1232  
 reduced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635  
 tyrosine phosphorylation and translocation in lipid rafts, induction by IGF-I, **295**, 1085
- Caveolin-scaffolding domain  
 CAV-3, conformation of synthetic peptides, effects of deletion of tripeptide sequence of muscular dystrophy, **298**, 203
- Cavitation  
 and gene expression in ultrasound-treated U937 cells: DNA microarray analysis, **290**, 498
- CBFA1/RUNX2  
 expression in osteoblasts, effects of TWIST inactivation, **297**, 641
- Cbl  
 negative regulation of EphA2 receptor, **296**, 214  
 role in shear-activation of phosphatidylinositol 3-kinase and c-Jun N-terminal kinase in endothelial cells, **292**, 892
- Cbl-b  
 role in context of immune activation associated with HIV-1 infection, **298**, 464
- CBP, *see* CREB-binding protein
- CCAAT boxes  
 promotion of transcription of APEX nuclease and *O*-sialoglycoprotein endopeptidase genes (mouse), **296**, 785
- CCAAT/enhancer-binding protein  
 inhibition after hepatectomy in rats with thioacetamide-induced liver cirrhosis, **292**, 474  
 regulation of resistin expression, **299**, 291
- CCAAT/enhancer-binding protein  $\alpha$   
 production by adipocytes in myostatin knockout mouse, **291**, 701  
 regulation of LXR $\alpha$  promoter activity, **293**, 1333  
 role in haptoglobin gene expression activated by all-*trans*-retinoic acid, **294**, 956
- CCAAT/enhancer-binding protein  $\beta$   
 activation by proteasome inhibitors in human intestinal epithelial cells, **290**, 469  
 regulation of LXR $\alpha$  promoter activity, **293**, 1333  
 role in glucocorticoid regulation of CCSP and *CYP2B1* promoters in lung cells, **293**, 907
- CCAAT/enhancer-binding protein  $\delta$   
 activation by proteasome inhibitors in human intestinal epithelial cells, **290**, 469  
 regulation of LXR $\alpha$  promoter activity, **293**, 1333  
 role in glucocorticoid regulation of CCSP and *CYP2B1* promoters in lung cells, **293**, 907
- ccdB*  
 DNA double-strand breaks in, end-joining by ataxia-telangiectasia nuclear extract, **297**, 275
- C cells  
 three-dimensional follicles with, maintenance for long term in organotypic culture of thyroid tissue, **294**, 906
- CCL5/RANTES  
 induction of mast cell migration via interactions with chemokine receptors CCR1 and CCR4, **297**, 480
- CD3  
 $\epsilon$  chain ITAM N- and C-terminal tyrosine phosphorylation, differential regulation in T cells, **291**, 574
- CD4  
 cytoplasmic domain, presence of helix in, promotion of binding to HIV-1 Nef protein, **292**, 734  
 hinge region, role in GP120 utilization by immunoglobulin domain 1, **292**, 449
- CD8  
 as reporter protein, localization in HSV-1 inner nuclear membrane via three-residue signal, **291**, 966
- CD9  
 expression by macrophages  
 downregulation by interferon- $\gamma$ , **290**, 891  
 effect of histone deacetylase inhibition, **294**, 660
- CD10  
 folding, role of C-terminal cysteines, **295**, 423
- CD11c  
 I domain, loops critical for specific recognition of fibrinogen, **292**, 756
- CD26, *see* Dipeptidyl peptidase IV
- CD31  
 priming for rapid adjustment of neutrophil cytoskeleton, **292**, 1092
- CD36  
 fatty acid translocase/CD36 and GLUT4 localization in different cellular compartments in rat cardiac muscle, **293**, 665  
 regulatory role in intestinal cholesterol uptake, **292**, 390  
 role in recognition and degradation of oxidized LDL in adipocytes, **295**, 319  
 role in thrombospondin-1 effects on IL-6 and IL-10 release by macrophages, **290**, 1551  
 upregulation, and apoptosis induction, by enzymatically modified LDL in monocytes, dissociation, **290**, 988
- CD40  
 downstream cellular effector molecules: Clast5/Stra13 as negative regulator of B cell activation, **292**, 121
- CD44  
 modulation during chondrogenesis, **292**, 819
- CD54  
 membrane-bound and soluble, expression in endothelial cells, modulation by glucosyl transferase inhibitor, **296**, 26
- CD73  
 mesenchymal stem cell, distinct epitopes on, recognition by SH-3 and SH-4 antibodies (human), **289**, 519; *erratum*, **290**, 1609
- CD95  
 anti-human CD95 antibodies, specificity, **297**, 459
- Cdc5  
 budding yeast, phosphorylation of Net1 and assistance in Cdc14 release from nucleolus, **294**, 687
- Cdc14  
 release from nucleolus in budding yeast, assistance by Cdc5, **294**, 687

- CDC25B**  
and CDC25C, restoration of functional checkpoint response after gene replacement in yeast, **295**, 673
- CDC25C**  
and CDC25B, restoration of functional checkpoint response after gene replacement in yeast, **295**, 673
- Cdc42**  
binding and hydrolysis of guanine nucleotides, kinetics, effect of  $Mg^{2+}$ , **297**, 653  
GDP binding states, analysis using urea interaction, **291**, 1276
- Cdc42 interacting protein-4**  
activated isoforms, identification and genetic analysis (human, mouse), **293**, 1426
- CdcA**  
orthologue SoxV, role in thiosulfate oxidation in *Rhodovulum sulfidophilum* and reduction of SoxW, **296**, 737
- CDH1**  
role in progression of embryonic cell cycles in *Xenopus*, **294**, 120
- CDK7**  
effects on HIV-1 Vpr glucocorticoid receptor coactivator activity and cell cycle arresting activity, **298**, 17
- cDNA**  
phage-displayed polypeptides encoded by, immunoscreening for identification of B cell targets in autoimmune disease, **298**, 169  
prostate-specific, molecular cloning, expression, and immunobiology of recombinant protein, **297**, 1075
- cDNA array**  
gene expression in osteoarthritic vs normal cartilage: enhanced YKL-39 expression (human), **299**, 109
- cDNA expression library**  
identification of autoantibodies associated with systemic lupus erythematosus, **295**, 119
- cDNA microarray, see also Microarray analysis**  
expression profiles of 109 apoptosis pathway-related genes in 82 mouse tissues and experimental conditions, **297**, 537  
gene expression profile analysis of liver during bacteria-induced fulminant hepatitis, **298**, 675  
identification of sodium butyrate-responsive genes in colonic epithelial cells, **293**, 1287  
kidney, global analysis of differentially expressed genes during progression of calcium oxalate nephrolithiasis, **296**, 544  
RIKEN, high-throughput screening using, identification of imprinted genes *Asb4*, *Ata3*, and *Dcn*, **290**, 1499  
screening of genes associated with matrix mineralization in human mesenchymal stem cells in vitro, **290**, 381  
zebrafish, construction, **296**, 1134
- cDNA representational difference analysis**  
gene expression in osteoarthritic vs normal cartilage: enhanced YKL-39 expression (human), **299**, 109
- Cdx1 gene**  
role in p53–p21<sup>WAF</sup>–Bcl-2 network in intestinal epithelial cells, **297**, 607
- Cdx2**  
interaction with lactase–phlorizin hydrolase promoter at cis-element, **299**, 587  
transgenic mice expressing, conversion of gastric mucosa to intestinal metaplasia, **294**, 470
- CEACAM1**  
secreted splice variants in rat cell lines and in vivo in serum, **292**, 749
- CEACAM6**  
gene expression in pancreatic cancer cells, differential display study, **293**, 391
- C/EBP, see CCAAT/enhancer-binding protein**
- CED-4**  
subcellular localization, oligomerization, and ATP binding (*Caenorhabditis elegans*), **290**, 359
- CeHDA-7**  
class II histone deacetylase interacting with MEF-2 in *Caenorhabditis elegans*, **293**, 1295
- ceiE7 mRNA**  
bactericidal Cole7 operon, specific cleavage of, **299**, 613
- Cel5Z**  
from *Pectobacterium chrysanthemi* PY35, activity enhancement by removal of part of C-terminal domain, **291**, 425
- Cell adhesion**  
embryonic cells, regulation by rac (*Xenopus laevis*), **298**, 364  
GPI-80 with regulatory potential for, physical association with  $\beta 2$  integrin, **294**, 692  
hematopoietic stem cells in umbilical cord blood, role of TIE2 (human), **298**, 731  
keratinocyte, support by  $\beta$ ig-h3 through  $\alpha 3\beta 1$  integrin, **294**, 940  
in megakaryocyte differentiation, role in sustained MEK1-ERK1/2 pathway activation in membrane skeleton, **297**, 664  
in megakaryopoiesis, role of NJ-1 surface antigen, **292**, 667  
monocytes to endothelial cells, effects of oral vitamin C (human), **294**, 1161  
neurons, synergistic effects of fibronectin and FGF receptors, **295**, 898  
neutrophils  
to human osteoblasts, promotion by microcrystals and f-Met-Leu-Phe, **296**, 759  
to selectins on endothelial cells exposed to cigarette smoke, **295**, 1150  
osteosarcoma cells to 70-kDa core region of thrombospondin-1, mediation by  $\alpha 4\beta 1$  integrin, **293**, 86  
properties of human  $\alpha 4$  subunit splice variants, **299**, 498  
protection of c-Raf-1 against ubiquitin-dependent degradation by proteasome, **294**, 976  
proteins involved in, in human uterine RL95-2 cells, effects of benzo[a]pyrene and TCDD, **294**, 101  
regulation of plasminogen activator inhibitor-1 gene expression in anchorage-dependent cells, **291**, 185  
role of second immunoglobulin-like loop of nectin, **293**, 45  
sLe<sup>x</sup>/E-selectin-mediated, inhibition of, metastasis suppression by macrophelide B via, **291**, 1065  
*Trypanosoma cruzi* to cardiac myoblasts, role of 45-kDa mucin, **290**, 29  
vascular endothelial cells to ECM, role in Ets-1 upregulation of MMP-1, **291**, 130  
vascular smooth muscle cells  
effects of hypoxia (human), **296**, 890  
to laminin-5, reduction by PDGF-BB, **294**, 1017  
*Vibrio cholerae* to epithelial cells, role of in vivo induced *icmF* gene, **295**, 922
- Cell attachment**  
human uterine RL95-2 cells, effects of benzo[a]pyrene and TCDD, **294**, 101
- Cell cell communication**  
gap junctional, role in NBT-II carcinoma behavior, **294**, 108
- Cell coculture**  
liver epithelial cells with hepatic stellate cells, induction of hepatocyte formation, **293**, 1420
- Cell cycle**  
association with expression of cancer/testis antigen gene *CAGE*, **292**, 715  
and DNA synthesis, in human ovarian cancer cells, effect of LH-RH, **294**, 11  
effects of exposure to power frequency magnetic fields in Ku80-deficient xrs5 cells, **292**, 355  
 $G_0$ – $G_1$  transition, mitogenically stimulated lymphocytes, effects of resveratrol, **297**, 1311  
 $G_1/S$  transition, Bcl-2 promotion of p53-dependent senescence versus apoptosis without effect on, **298**, 282



- G<sub>2</sub>M checkpoint, chk1 signaling pathways mediating, relationship to cellular resistance to BNP1350, **295**, 435
- inhibition, role in Clast5/Stra13 function as negative regulator of B cell activation, **292**, 121
- major defects in, resulting from targeted disruption of one Chk-YB-1b allele, **296**, 451
- Nek2 role in multiple cellular functions during, **290**, 730
- regulation
- in chondrocytes, role of actin interaction with CTGF/Hcs24, **299**, 755
  - RING finger protein NIRF involved in, **296**, 530
  - survivin expression dependent on, during liver regeneration, **297**, 59
- Cell cycle arrest
- G<sub>2</sub>/M
- induction by bisphenol A in ovarian granulosa cells, **292**, 456
  - p21<sup>WAF1/CIP1</sup>-mediated, in p53-deficient human lung cancer cells, effect of H<sub>2</sub>O<sub>2</sub>-induced AP-1 activation, **293**, 1248
  - by HIV-1 Vpr, effects of TFIIF components, **298**, 17
  - human transformed cells, by *N*-coumaroyltyramine via protein-tyrosine kinase inhibition, **292**, 1104
  - induction by p38 MAPK activation via Raf/ERK pathway
  - inhibition during muscle differentiation, **298**, 765
  - role of ZAK utilizing MKK7, **297**, 105
- Cell cycle progression
- differential localization of nPKC $\delta$  during, **294**, 127
  - effects of CIP29 overexpression, **292**, 593
  - endothelial cells, role of heme oxygenase-1 gene, **291**, 68
  - endothelial and smooth muscle cells, differential effect of heme oxygenase-1, **296**, 1077
  - at G1 and S phases
    - abrogation via p21 induction by hygrolidin, **298**, 178
    - effects of P15RS gene, **299**, 880  - mitogenically stimulated lymphocytes, effects of resveratrol, **297**, 1311
  - relationship to CNT1 expression in rat hepatoma cell line, **296**, 575
  - role of LIM-kinase-1 via regulation of actin cytoskeletal rearrangements, **290**, 1315
  - Schizosaccharomyces pombe*, role of Cu,Zn-SOD, **297**, 854
  - in *Xenopus* embryo, role of APC regulator CDH1, **294**, 120
- Cell death, *see also* Apoptosis; Necrosis
- breast cancer cells, effects of non-IGF binding mutant of IGFBP-5, **294**, 995
  - cell shrinkage-dependent, role of Mcl-1 downregulation by inhibition of PI3-K/Akt pathway, **290**, 1275
  - cervical tumor cells, promotion by ceramide in absence of markers of apoptosis (human), **293**, 1028
  - cisplatin-induced, p73-dependent *DAN* expression during, **295**, 501
  - death receptor-induced, inhibition by death effector domain-only polypeptides of caspase-8 and caspase-10, **291**, 484
  - necrosis-like, TNF-induced, p21<sup>WAF1/Cip1</sup> upregulation prior to, **294**, 672
  - oxLDL-induced, mediation by LOX-1 expressed in cultured rat chondrocytes, and role of Akt dephosphorylation, **299**, 91
  - promotion by vacuole membrane protein 1 (rat), **290**, 641
  - by pyruvate deficiency, in proliferative cultured calvarial osteoblasts, **294**, 1177
- Cell density
- regulation of subcellular localization of  $\beta$ -catenin, **292**, 195
- Cell differentiation factor
- IF3, high-level expression in murine liver and ovary, **297**, 323
- Cell division
- in astrocytes, role of 14-3-3 $\gamma$  association with actin, **296**, 657
  - coupling of chromosome replication to, role of Cgta, **292**, 333
- Cell growth
- in 96-well arrays, in measurement of  $\beta$ -galactosidase activity in bacteria, **290**, 397; *erratum*, **292**, 292
  - arrest in hepatoma cells, and control of phosphoenolpyruvate carboxykinase expression, **290**, 1513
  - breast cancer 4T1 cells in vitro and in vivo, effect of resveratrol, **291**, 1001
  - coupling of chromosome replication to, role of Cgta, **292**, 333
  - effect of dlk in fibroblasts, and dlk interaction with growth-modulating modules in yeast two-hybrid system, **291**, 193
  - gastric cancer cells, inhibition by anticancer drugs, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480
  - hepatocellular carcinoma cells, TGF- $\beta$ -induced inhibition of, attenuation by cyclin D1 overexpression, **292**, 383
  - hepatocytes, stimulation by EGF and G-protein-coupled receptor agonists, role of MAP kinases, **291**, 588
  - inhibition by developmental regulator hTBX5, **297**, 185
  - initiation, calcium-dependent oxidation of thioredoxin during, **290**, 624
  - medullary thyroid carcinoma cells, effect of somatostatin receptor subtype 1 (human), **297**, 828
  - outer root sheath cells in vitro, inhibition by IFN- $\beta$  secreted from human hair dermal papilla cells, **290**, 1133
  - regulation, distinct functions of fibroblast growth factor receptor 3 isoforms in, **290**, 113
  - tumor-like, genes causing, overexpression in rheumatoid synovial fibroblasts, **294**, 1121
- Cell invasion
- cancer cells,  $\beta$ 1,3-*N*-acetylglucosaminyltransferase involved in, **294**, 843
  - nonphagocytic cells by *Trypanosoma cruzi*, regulation by endocytically active dynamin, Rab5, and Rab7, **291**, 516
- Cell lines
- CHSE-214 (Chinook salmon embryo cells), cytotoxic effects of *Vibrio mimicus* phospholipase A, **298**, 269
  - mammalian
    - activation of IL-1 $\beta$  transcription by human lactoferrin, **290**, 236
    - gene silencing by preformed small RNA duplexes, **295**, 744
    - methionine sulfoxide reductase B incorporation and expression, effect of selenocysteine, **297**, 956
- Cell migration
- A549 cells on laminin-10/11, role of matrix metalloproteinase-2, **296**, 73
  - angiotensin II-induced, blocking by metalloproteinase inhibitor via inhibition of EGF receptor transactivation, **294**, 1023
  - breast cancer cells, induction by protein kinase C by upregulation of u-plasminogen activator secretion, mechanism, **290**, 552
  - endothelial cells, inhibition by PPAR activators via targeting of Akt, **293**, 1431
  - GPI-80 with regulatory potential for, physical association with  $\beta$ 2 integrin, **294**, 692
  - highly invasive breast and prostate cancer cells, suppression by *Ganoderma lucidum*, **298**, 603
  - keratinocyte, support by  $\beta$ ig-h3 through  $\alpha$ 3 $\beta$ 1 integrin, **294**, 940
  - mast cells, induction
    - by CCL5/RANTES via interactions with chemokine receptors CCR1 and CCR4, **297**, 480
    - by eotaxin via Rac-ERK-dependent pathway (RBL-2H3 cells), **298**, 392  - mesangial cells,  $\alpha$ 1 $\beta$ 1 integrin-mediated, stimulation by endothelin-1 (rat), **299**, 555
  - sphingosine kinase-dependent, leukocytes, effect of phorbol ester (human), **297**, 806
  - sphingosine 1-phosphate-induced, vascular endothelial and smooth muscle cells, enhancement by EDG-5 antagonist, **299**, 483
  - vascular smooth muscle cells
    - on laminin-5, PDGF-BB-stimulated, mediation by ERK1/2, **293**, 1000
    - role of phosphoinositide 3-kinase C2 $\alpha$ , **297**, 261

- signal cascades mediating, triggering by hepatocyte growth factor, **298**, 80
- Cell morphology
- apoptotic lymphocytes (human), **294**, 872
  - erythrocytes, changes in NIDD patients and protective effects of *N*-acetylcysteine, **290**, 1393
  - regulation, distinct functions of fibroblast growth factor receptor 3 isoforms in, **290**, 113
- Cell motility
- highly invasive breast and prostate cancer cells, suppression by *Ganoderma lucidum*, **298**, 603
  - Vibrio cholerae*, role of in vivo induced *icmF* gene, **295**, 922
- Cell-penetrating peptide
- cell membrane translocation of N-terminal part of prion protein, **299**, 85
- Cell polarity
- E-cadherin-dependent, in HT-29 colon epithelial cells, stimulation by CAS/CSE 1, **294**, 900
- Cell proliferation
- airway smooth muscle cells, thrombin-induced, attenuation by inhibitors of tyrosine kinase signaling cascade (guinea pig), **293**, 72
  - associated cytokine-inducible protein CIP29, cloning and characterization, **292**, 593
  - astroglial, effects of antisense oligonucleotides directed against phospholipase D, **297**, 545
  - breast cancer cells
    - inhibition by Wilms' tumor 1 protein downregulation, **295**, 784
    - in response to leptin (MCF-7 cells), **293**, 622
  - Caco-2 cells, effect of vitamin D analog ZK 156718, **290**, 504
  - ECV304 cells, gene IC53 stimulating, upregulation in failing heart, **294**, 161
  - endothelial cells with different phenotypes, opposite effects of pigment epithelium-derived factor, **294**, 764
  - erythroleukemia K562 cells, reduction by SHIP2 overexpression, **296**, 106
  - G<sub>0</sub>–G<sub>1</sub> transition and cell cycle progression in mitogenically stimulated lymphocytes, effects of resveratrol, **297**, 1311
  - Helicobacter pylori*-induced, and *c-fos* activation through serum response element transactivation, **291**, 868
  - hematopoietic stem cells in umbilical cord blood, role of TIE2 (human), **298**, 731
  - hepatocytes, hepatocyte growth factor-mediated, integral role of epidermal growth factor receptor, **290**, 197
  - HPV-associated tumor cells, inhibition by interleukin-2, **299**, 818
  - inhibition
    - by CARP overexpression in tumor cell lines, **293**, 1396
    - role in Clast5/Stra13 function as negative regulator of B cell activation, **292**, 121
  - keratinocyte, support by  $\beta$ ig-h3 through  $\alpha$ 3 $\beta$ 1 integrin, **294**, 940
  - mammary epithelial cells, role of JAK2, **296**, 139
  - mouse mammary tumor S115 cells, effect of recombinant syndecan-1 minican with truncated core protein, **290**, 146
  - myeloma cells, role of extracellular calcium-sensing receptor expression, **299**, 532
  - osteoblasts, reduction by inhibition of NF- $\kappa$ B (Saos-2 cells), **297**, 237
  - role of subcellular localization of  $\beta$ -catenin, **292**, 195
  - smooth muscle cells, inhibition, YC-1-mediated vascular protection through, **291**, 1014
  - spermatogonia in newt testis organ culture, effects of human recombinant stem cell factor, **294**, 695
  - T cells, induced by Con A, stimulation by  $\beta$ -endorphin-like peptide SLTCLVKGFY, **292**, 799
  - vascular smooth muscle cells, PDGF-BB-stimulated, mediation by ERK1/2, **293**, 1000
- Cell receptor–ligand affinity
- micromechanical coupling between cell surface receptors and RGD peptides, **296**, 771
- Cell rounding
- induction by fibroblast growth factor receptor 3 isoforms, **290**, 113
- Cell shape
- control, requirement of intact vinculin protein for, **290**, 749
  - erythrocyte structural flexibility, role of transglutaminase (mouse), **291**, 1123
  - protrusions in v-Src-transformed cells, stimulation by phospholipase D2, **293**, 201
- Cell shrinkage
- apoptotic lymphocytes (human), **294**, 872
  - cell death dependent on, role of Mcl-1 downregulation by inhibition of PI3-K/Akt pathway, **290**, 1275
- Cell surface receptors
- and RGD peptides, micromechanical coupling between, **296**, 771
- Cell survival
- transplanted fat tissues in mice, effects of nutrition, **295**, 630
- Cellular injury
- and G $\beta\gamma$  counteraction of G $\alpha_q$  signaling upon  $\alpha$ -adrenoceptor stimulation in neonatal cardiomyocytes, **291**, 995
- Cellulase
- Cel5Z in glycoside hydrolase family 5, removal of part of C-terminal domain (*Pectobacterium chrysanthemi* PY35), **291**, 425
- Cellulolytic active oxygen species hydroxyl radical
- effect of alkylitaconates (*Ceriporiopsis subvermispota*), **297**, 918
- Cellulose
- bacterial, construction of high-order structure in, role of ORF2 gene, **295**, 458
- Cellulose-binding domain
- pollen allergen from rye grass, homology modeling, **296**, 1346
- Cell wall
- autolysis, induction by  $\beta$ -lactams via depolarization of membrane potential, **290**, 1169
- Contractin
- aberrant expression in fetal Down syndrome brain, **291**, 62
- Central nervous system
- developing
    - DSCAM expression in, endogenous promoter driving, **299**, 1
    - expression of murine BTB/POZ zinc finger gene *Znf131*, **296**, 319
    - disulfated sulfakinin from, isolation, identification, and synthesis (white shrimp), **299**, 312
    - gonadotropin-releasing hormone-like peptide immunohistochemistry (*Octopus vulgaris*), **291**, 1187
- Centrosome
- Golgi-nucleating function, **291**, 494
  - Nek2 localization in mitotic cells, **290**, 730
- Cephotaxime
- effect on membrane potential in *Streptomyces griseus*, **290**, 1169
- Ceramidase
- neutral, gene encoding, genomic structure and promoter analysis (mouse), **299**, 160
- Ceramide
- accumulation, independence from camptothecin-induced apoptosis in prostate cancer LNCaP cells, **294**, 363
  - induction of neuronal apoptosis via caspase-9/caspase-3 pathway, **299**, 201
  - modulation of CYP3A4 expression in colon carcinoma HT-29 cells, **298**, 687
  - promotion of cervical tumor cell death in absence of markers of apoptosis (human), **293**, 1028
  - regulation of LIM kinase-1 gene in renal mesangial cells, **298**, 408
  - role in PDMP effect on shedding of membrane-bound CD54 in endothelial cells, **296**, 26
- Cerebellum
- development, role of mammalian DSCAMs, **293**, 881



- non-adenylyl cyclase-coupled cannabinoid binding site (mouse), **292**, 231
- p53<sup>-/-</sup> mouse, neuronal cell line 2Y-3t established from, cloning of neuronal differentiation-related genes from, **297**, 473
- Cerebral cortex
- API complex expression in cultured neurons, effect of static magnetic field (rat), **292**, 200
  - development, and dynamic regulation of *rgpr85* encoding G protein-coupled receptor (rat), **298**, 613
  - development, role of mammalian DSCAMs, **293**, 881
- Cerebral ischemia
- injury from, protection by recombinant adenoviral expression of dominant negative IkB $\alpha$ , **299**, 14
- Ceriporiopsis subvermispota*
- alkylitaconates, effect on cellulolytic active oxygen species hydroxyl radical, **297**, 918
- Cerivastatin
- and fibrates, as ligands for PPAR isotypes and effects on induction of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131
- Cerulenin
- inhibition of fatty acid synthase in breast cancer cells, associated malonyl-CoA-induced inhibition of fatty acid oxidation and cytotoxicity, **285**, 217; *erratum*, **295**, 570
- Ceruloplasmin
- anionic glycan oligo/poly  $\alpha$ 2,8 deaminoneuroaminic acid on, detection, **295**, 597
- Cervical carcinoma cells
- HeLa cells derived from, *see* HeLa cells
  - p53 tumor suppressor pathway, restoration by sodium arsenite (human), **293**, 298
- Cervical intraepithelial neoplasia
- low-grade, fate of, association with neutralizing antibodies against HPV16, **296**, 102
- Cervical tumor cells
- death of, promotion by ceramide in absence of markers of apoptosis (human), **293**, 1028
- c-Fos
- surface pressure-dependent modulation of phospholipase activity, **295**, 964
- c-fos gene
- activation by *Helicobacter pylori* through serum response element transactivation, **291**, 868
  - expression in breast cancer MCF-7 cells, regulation by estrogen via PI-3-kinase-dependent activation of serum response factor, **294**, 384
  - transcriptional activation by LIM protein Hic-5, **299**, 360
- c-Fyn
- role in FGF-2-mediated tube-like structure formation by brain capillary endothelial cells (mouse), **290**, 1354
- Cgta
- role in coupling chromosome replication to cell growth and cell division, **292**, 333
- Chain-length determination
- product specificity of *Sulfolobus solfataricus* hexaprenyl diphosphate synthase and mimetic mutations, **297**, 1097
- Chaperone activity
- porcine  $\alpha$ B-crystallin, enhancement by C-terminal lysine truncation, **297**, 309
  - Pyrococcus* prefoldin, **291**, 769
- Chaperonins
- GroESL, mediation of folding of human liver mitochondrial aldehyde dehydrogenase in *E. coli*, **298**, 216
  - stabilization and transfer of protein-folding intermediates by *Pyrococcus* prefoldin to, **291**, 769
- Charcot-Marie-Tooth type 4B
- hMTMR2 protein mutated in, potential functional redundancy with hMTM1 and hMTMR3, **291**, 305
- Checkpoint response
- functional, restoration in yeast after gene replacement by human CDC25B and CDC25C, **295**, 673
- Chemical systems
- systems approach to evolution, editorial, **297**, 689
- Chemokine receptors
- CCR1 and CCR4, role in selective CCL5/RANTES-induced mast cell migration, **297**, 480
  - CCR2, isoforms, differential expression in monocytes, **290**, 73
  - CCR5
    - ionic interaction of HIV-1 V3 domain with, and deregulation of T cell function, **298**, 574
    - polymorphism at protein level, **296**, 477
    - role in  $\alpha$ -fetoprotein binding to primary macrophages, **296**, 507
- Chemokines
- CXC, role in enhancement of LPS-induced neutrophil accumulation in mouse lung by dexamethasone, **294**, 1101
  - expression by dendritic cells, modulation by vitamin D<sub>3</sub> and glucocorticoid pathways, **297**, 645
  - gene expression profile in liver during bacteria-induced fulminant hepatitis, analysis by cDNA microarray system, **298**, 675
  - proinflammatory cytokine-induced production in human endothelial cells, prevention by APC0576, **293**, 945
- Chemoprevention
- cancer, implications of aspirin inhibition of oxidative DNA strand breaks, **293**, 705
- Chemoreceptors
- model airway, acute O<sub>2</sub> sensing, lack of role of mitochondrial electron transport (H146 cells), **291**, 332
- Chemosensory proteins
- binding properties (locust), **293**, 50
- Chemostat
- Pseudomonas* sp. from, pentachlorophenol-degrading monooxygenase gene, cloning and characterization, **290**, 770
- Chemotaxis
- induction in smooth muscle cells, effect of TGF- $\beta$  receptor-binding peptides, **293**, 1279
  - mast cells
    - eotaxin-induced, role of Rac-ERK-dependent pathway (RBL-2H3 cells), **298**, 392
    - stimulation by CCL5/RANTES via interactions with chemokine receptors CCR1 and CCR4, **297**, 480
  - p70S6k and MAPK cell signaling pathways leading to, molecular crosstalk between, **293**, 463
  - Ralstonia* sp. SJ98 toward co-metabolizable nitroaromatic compounds, **299**, 404
- Chilling injury
- in discs excised from zucchini, physiological responses, effects of peptic oligomers, **290**, 577
  - responses in zucchini squash, effect of infiltrated polyamines, **295**, 98
- Chimeric mice
- with extra human chromosome 21, reduced mcl-2a expression in, **295**, 112
- Chimeric proteins
- for study of cellular fate of endogenous proteins, **290**, 332
- Chiral recognition
- role of protein domain of chicken  $\alpha$ <sub>1</sub>-acid glycoprotein, **295**, 587
- Chitinase
- isolation from pinto bean seeds and macrophage-stimulating activity, **290**, 813
- Chitinase 3-like gene family
- enhanced human chitinase 3-like 2 gene vs chitinase 3-like 1 gene expression in osteoarthritic cartilage, **299**, 109
- Chitin synthase
- class V, *csmA* gene encoding, translation as single polypeptide and regulation by osmotic conditions (*Aspergillus nidulans*), **298**, 103



- Chitosan**  
treatment of rice seedling leaves, associated octadecanoid signaling component burst, **295**, 1041
- Chk1**  
signaling pathways mediating G<sub>2</sub>M checkpoint, relationship to cellular resistance to BNP1350, **295**, 435
- Chk-YB-1b gene**  
allele of, targeted disruption in DT40 cells resulting in cell cycle defects, **296**, 451
- Chloride**  
cAMP-dependent transport in airway epithelial cells, effects of S-nitrosoglutathione, **297**, 552
- Chloride channels**  
activity, association with Gef1 protein (*Saccharomyces cerevisiae*), **294**, 1144  
cardiac, as targets: tefluthrin modulation of anionic background conductance I<sub>AB</sub> in guinea pig ventricular myocytes, **292**, 208  
CLC-7, expressed in *Xenopus* oocytes, activation by acidic pH, **291**, 421  
inhibitors, eliminating membrane depolarization caused by Alzheimer A $\beta$ (1-42, aggr.) peptide, **293**, 1204
- Chloride conductance**  
cAMP-dependent, mediation by pCLCA1 in Caco-2 cells, **298**, 531
- Chloride intracellular channel protein**  
CLIC4, overexpressed, as essential component of associated plasma membrane anion channels, **297**, 317
- Chlorination**  
folic acid by hypochlorous acid, **297**, 1238
- 5-Chlorocytosine**  
loss in DNA treated with reactive oxygen species, implications for assessment of oxidative damage in vivo, **296**, 883
- Chloroperoxidase**  
cross-linked crystals, activity and stability, **295**, 828
- Chlorophyll**  
biosynthesis, significance of protoporphyrin IX in chloroplast envelope membranes (pea), **299**, 751
- Chloroplasts**  
envelope membranes, protoporphyrin IX detection (pea), **299**, 751  
phage-type RNA polymerase in *Nicotiana glauca* targeted to, non-AUG mRNA translation initiation, **299**, 57  
SecE, spontaneous insertion into thylakoid membrane, **293**, 747
- 5-Chlorouracil**  
loss in DNA treated with reactive oxygen species, implications for assessment of oxidative damage in vivo, **296**, 883
- Cho, Wan Kyoo**  
interview, **297**, 1071
- CHO cells**  
CHO-VR1, vanilloid receptor-1 in, effect of thapsigargin, **293**, 777  
human motilin receptor-expressing, motilin pharmacophore in, **293**, 1223  
human and rodent epithelial Ca<sup>2+</sup> channels expressed in, rapid inactivation due to single amino acid mutation, **291**, 278  
hypocretin receptor 2-transfected, hypocretin stimulation of [<sup>35</sup>S]GTP $\gamma$ S binding in, **294**, 615  
minican expression: recombinant syndecan-1 with truncated core protein, **290**, 146  
msr/apj receptor-expressing, activation of ERKs by apelin (65–77) via PTX-sensitive G protein, **290**, 539  
pex2 mutant with catalase-deficient temperature-sensitive PTS1 and PTS2 import, **293**, 1523  
PEX7-defective mutants, isolation, **293**, 225  
reporter gene expression, effect of rabbit  $\alpha$ s1-casein gene distal enhancer, **290**, 53  
soluble integrin  $\alpha$ 2 $\beta$ 1 heterodimer complex production, with functional activity in vitro and in vivo, **290**, 305  
Zfhep transcription factor phosphorylation, **296**, 368
- Cholecystokinin**  
analogs, intestinal metabolism and absorption (rat), **292**, 632  
CCK-8 and CCK-58, bioactive region conformations, NMR study, **293**, 1014  
sulfated CCK-15, conformational and molecular modeling studies, **293**, 1053
- Cholecystokinin receptor**  
CCK<sub>2</sub>, mRNA, expression by rat parietal cells, **297**, 335
- Cholesterol**  
ABCA1-driven efflux, role of apolipoprotein A-I C-terminal domain, **299**, 801  
ABCA9 responsive to, molecular structure, **295**, 408  
biosynthesis  
first step of oxygenation in, Konrad Bloch special issue, **292**, 1283  
Konrad Bloch as pioneer in, **292**, 1117  
from lanosterol, membrane-bound enzymes of, Konrad Bloch special issue, **292**, 1139  
and diacylglycerol, synergistic perturbation of phosphatidylcholine/sphingomyelin bilayers, **296**, 806  
endoplasmic reticulum, effect of protein kinase C, **290**, 488  
foam cells loaded with, apolipoprotein E levels, modulation by glycosphingolipids, **290**, 1361  
and hydroxycholesterols and bile acids: Konrad Bloch special issue, **292**, 1147  
intestinal uptake, regulation by biliary anionic peptide fraction and ApoA-I, **292**, 390  
levels, relationship to phenobarbital induction of cytochromes P450, **291**, 378  
levels in aortic extracts, effect of secretory phospholipase A<sub>2</sub> deficiency (mouse), **294**, 88  
metabolism in hepatocarcinoma cells, effect of Cu,Zn superoxide dismutase, **295**, 603  
serum levels, effects of adenoviral overexpression of apolipoprotein A-V (mouse), **295**, 1156
- Cholesterol efflux**  
from cells, LDL apolipoprotein-mediated, **291**, 727  
and dominant expression of ABCA1 on basolateral surface of Caco-2 cells stimulated by LXR/RXR ligands, **296**, 625  
effects of ATP-binding cassette transporter-1 mutations in Japanese patients with HDL deficiency, **290**, 713  
from macrophages  
to free apolipoprotein A-I in C3H and C57BL/6 mice, **290**, 1376  
inhibitory effect of angiotensin II, **290**, 1529  
stimulation by testosterone, **296**, 1051  
promotion by cAMP-specific phosphodiesterase 4 inhibitors, **290**, 663
- Cholesterol-rich diet**  
hyperlipidemia induced by, inhibition of heat shock response in rat heart, **290**, 1535  
upregulation of Rab7 gene in liver and artery, **293**, 375
- Cholesteryl esters**  
hydrolysis in macrophages, role of hormone-sensitive lipase, **292**, 900
- Choline kinase**  
frequent overexpression in human tumor-derived cell lines and lung, prostate, and colorectal cancers, **296**, 580
- Cholinephosphotransferase**  
expression in normal and cancerous human mammary epithelial cells (human), **297**, 1043
- Chondrocytes**  
actin interaction with CTGF/Hcs24, **299**, 755  
actinomycin D- or MG132-sensitized, TNF- $\alpha$ -mediated apoptosis in, **295**, 937  
articular  
apoptosis induction by TRAIL in vitro (human), **296**, 671  
cyclooxygenase-2 expression, regulation by  $\beta$ -catenin, **296**, 221

- connective tissue growth factor gene expression, *cis*-element enhancing, **295**, 445
- developing, transgenic EXT2 gene expression in, effects on heparan sulfate synthesis and bone formation (mouse), **292**, 999
- effects of targeted overexpression of pleiotropin, **298**, 324
- expansion, differentiation, and growth factor treatment, molecular analysis (human), **293**, 284
- LOX-1 expressed in cultured cells, mediation of oxidized LDL-induced cell death (rat), **299**, 91
- sequential cellular de- and redifferentiation in tissue engineering, growth factors for, **294**, 149
- Chondrogenesis**
- CD44 and hyaluronidase modulation during, **292**, 819
- potential of adipose tissue-derived stromal cells for, in vitro and in vivo models, **290**, 763
- Chondroitin**
- desulfated, inhibition of hydroxyapatite crystal growth, **292**, 727
- Chondroitin 4-sulfate**
- inhibition of hydroxyapatite crystal growth, **292**, 727
- synthesis by adipose tissue-derived stromal cells, **290**, 763
- Chondroitin 6-sulfate**
- inhibition of hydroxyapatite crystal growth, **292**, 727
- Chondroitin sulfates**
- characterization in wild-type *Caenorhabditis elegans*, **293**, 1374
- Chondro-osteogenesis**
- bone matrix powder-induced, heterotopic, effect of basic fibroblast growth factor, **293**, 680
- Chorioallantoic membrane**
- angiogenesis in, stimulation by poly-L-lysine/heparin (chicken), **290**, 820
- Choriocarcinoma cells**
- placental, leptin internalization by, stimulation by arachidonic acid (BeWo cells), **299**, 432
- Smad3 restitution, restoration of TGF- $\beta$  regulation of plasminogen activator inhibitor-1, **294**, 1079
- transcription regulation of human placental leucine aminopeptidase/oxytocinase gene by AP-2 and Ikaros (BeWo cells), **290**, 1048
- Chromafenozide**
- ecdysone agonist activity in Sf9 cells, **292**, 1087
- Chromate**
- reduction to soluble chromium(III)-NAD<sup>+</sup> complex by bacterial flavin reductase system, **294**, 76
- Chromatin**
- condensation in mammalian cells, Nek6 as mitotic histone kinase regulating, **293**, 753
- photobleaching of GFP-labeled H2AX in, **297**, 1318
- remodeling
- mammalian SWI/SNF complex for, role of nuclear actin-related protein ArpN $\alpha$ , **299**, 328
- role of Hrp3 in fission yeast, **295**, 970
- signals to, and *FMRI* silencing, **295**, 575
- structure, implications of DNA-DNA complex formation by mononucleosomes assembled on DNA fragment with (GGA/TCC)<sub>n</sub> repeats, **290**, 16
- Chromatin-associated protein**
- Phf5a protein in murine multigene family containing PHD-finger-like motif, **293**, 816
- Chromium(III)-NAD<sup>+</sup> complex**
- chromate reduction to, by bacterial flavin reductase system, **294**, 76
- Chromo-helicase/ATPase DNA binding proteins**
- Hrp3, requirement for heterochromatin silencing in fission yeast, **295**, 970
- Chromosome 4**
- genetic and physical maps of *jerker* (*Espr<sup>re</sup>*) (mouse), **296**, 1143
- rgpr85* localization at 4q21: G protein-coupled receptor (rat), **298**, 613
- Chromosome 5**
- phosphodiesterase 8B gene mapping to 5q13 (human), **297**, 1253
- Chromosome 6**
- C6orf37* gene identification and characterization on 6q14 (human), **293**, 356
- Chromosome 7**
- 7C region homologous to Prader-Willi syndrome region, paternal expression of imprinted gene *Peg12/Frat3* (mouse), **290**, 403
- histone deacetylase 9 gene localization to 7p21 (human), **293**, 182
- mucin MUC17 mapping to 7q22 (human), **291**, 466
- Chromosome 8**
- Nedd4 protein WWP1 localization on 8q21 (human), **290**, 431
- Chromosome 10**
- CARP localization to 10p13, **293**, 1396
- Chromosome 12**
- calcyphosin 2 localization to 12q15 (human), **291**, 414
- Chromosome 16**
- Urb* gene mapping to *D16Mit15* in bombesin receptor subtype-3-deficient mice, **290**, 1282
- Chromosome 17**
- BAZF* gene localization to 17p13.1 (human), **291**, 567
- CTI20* gene isolation from 17p13.3 (human), **297**, 528
- Chromosome 19**
- BRAF25 localization (human), **295**, 129
- CIP4 gene localization to 19p13.3 (human), **293**, 1426
- prostate-derived cDNA mapping to, in human, **296**, 281
- Chromosome 21**
- ABCC13 gene localization on 21q11.2 (human), **299**, 410
- human extra, reduction of *mlc-2a* expression in chimeric mice and Down syndrome, **295**, 112
- single human, pre-mature neurons differentiated from mouse ES cells with, elevated apoptosis of, **299**, 599
- Chromosomes**
- conserved physical linkage of *GnRH-R* with *RBM8* in medaka and human genomes, **293**, 327
- gene localization for immune-mediated complex diseases (human), **295**, 771
- histone deacetylase 9 gene organization and localization (human), **293**, 182
- Nek2 localization in mitotic cells, **290**, 730
- relative telomere length differences between, correlation with chromosome size (human), **291**, 210
- replication, coupling to cell growth and cell division, role of Cgta (*Vibrio harveyi*), **292**, 333
- replication origin in yeast, silkworm rDNA nuclear matrix attachment region function as, **299**, 723
- whole bacterial, analysis of bilateral inverse symmetry in, **299**, 126
- X chromosome, *see* X chromosome
- Chronic obstructive pulmonary disease**
- associated genetic variants of  $\beta$ -defensin-1, **291**, 17
- Chymase**
- mast cell, regulation of dermal mast cell number in mice, **290**, 1478
- Chymotrypsin**
- selectivity for, of Kunitz trypsin inhibitor with one disulfide bridge purified from *Swartzia pickellii*, **291**, 635
- $\alpha$ -Chymotrypsin
- structure and activity, effects of polyhydroxy compounds, **293**, 416
- cIAP1**
- role in regulation of normal enterocyte susceptibility to Fas-induced apoptosis, **290**, 1308
- cIAP2**
- role in regulation of normal enterocyte susceptibility to Fas-induced apoptosis, **290**, 1308
- Cigarette smoke**
- induction of neutrophil capture by selectins on endothelial cells, **295**, 1150



- Ciglitazone**  
inhibition of IgE heavy chain germline transcript expression in DND39 B cells, **295**, 547
- Cilomilast**  
promotion of ABCA1 expression and cholesterol efflux, **290**, 663
- Cimetidine**  
effect on formation of toxic metabolite of acetaminophen, **291**, 1089
- CIP4**  
activated isoforms, identification and genetic analysis (human, mouse), **293**, 1426
- CIP29**  
proliferation-associated, cloning and characterization, **292**, 593
- Ciprofloxacin**  
induction of oxidative stress in *Staphylococcus aureus*, **297**, 1003
- Circadian clock**  
mammalian, interactivating feedback loops in, **290**, 933
- Circadian rhythms**  
mammalian, role of interactivating feedback loops, **290**, 933  
nitrate reductase in *Gracilaria tenuistipitata*, **295**, 50  
regulatory pathway components, expression by immortalized suprachiasmatic nucleus cells, **292**, 20  
role of functional CLOCK in entrainment of peripheral clocks to feeding behavior, **298**, 198  
synchronization and phase-resetting by glutamate of immortalized suprachiasmatic nucleus cell line, **298**, 133
- Circular dichroism**  
Alzheimer  $\beta$ -amyloid peptide- $\beta$ -cyclodextrin interaction, **297**, 1011  
hBD-1(Ser35) peptide derived from DEFB1 polymorphism: structural and functional characterization, **293**, 586  
lens  $\alpha$ A-crystallin: decreased subunit exchange after heat treatment, **293**, 7  
MCD, and MLD, visible region, of nitrosylferrohemoglobin and oxyhemoglobin, **297**, 220  
secondary structure determination for *Escherichia coli* DnaA DNA-binding domain in solution, **299**, 42  
second TSP1 module of human thrombospondin 1, **296**, 156  
thermostable aldehyde dehydrogenase from *Cytophaga* sp. KUC-1: characteristics and functional properties, **298**, 632  
vacuolar ATPase subunit E, **298**, 383
- Circular RNA**  
stable RNA aptamer against HIV-1 nucleocapsid protein, **291**, 925
- Circular RNA–DNA enzyme**  
obtained by in vitro selection, activity and stability compared to hammerhead ribozyme, **292**, 1111
- Cirrhosis**  
and proteome analysis in hepatocellular carcinoma, **291**, 1031
- cis-elements**  
distinct, on *YIALKI* promoter of *Yarrowia lipolytica*, *n*-alkane-induced transcriptional induction through, **294**, 1071  
involved in expression of unspliced RNA in Moloney murine leukemia virus, **290**, 1139
- Cisplatin**  
breast cancer cell sensitivity to, effect of recombinant adenovirus-mediated p14<sup>ARF</sup> overexpression, **296**, 792  
cell death induced by, p73-dependent *DAN* expression during, **295**, 501  
effects on expression of DNA ligases in MiaPaCa human pancreatic cancer cells, **298**, 537  
inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334
- Citrate**  
transport by mitochondrial tricarboxylate carrier BBG-TCC, **295**, 463
- Citrate transporter**  
hepatic mitochondrial, expression, starvation-induced posttranscriptional control (rat), **299**, 418
- $\text{Na}^+$ -coupled, primary structure, genomic organization, and transport function (human), **299**, 465
- c-Jun N-terminal kinase**  
activation by ZAK utilizing MKK7, **297**, 105  
anti-mitogenic pathway from  $\alpha$ 1B-adrenergic receptor to, role of Dbl's Big Sister, **296**, 85  
JNK1/2, activation in monocytes by LPS, effect of hepatitis B surface antigen, **297**, 486  
MEKK1/MKK4/JNK cascade in endotoxin-activated microglia, effects of VIP and PACAP, **293**, 771  
pathway in peritoneal macrophages, heat shock response inhibition of IL-18 expression through, **296**, 742  
role in TNF- $\alpha$ -induced apoptosis in mouse epidermal JB6-derived RT-101 cells, **295**, 24  
shear-activation in endothelial cells, role of Cbl, **292**, 892  
signaling pathway, inhibition by quercetin glucuronide, preventive effect on angiotensin II-induced VSMC hypertrophy, **293**, 1458
- CLA-1/SR-BI**, see Scavenger receptor class B type I
- Clara cell secretory protein**  
gene promoter for, regulation by glucocorticoids via C/EBP $\beta$  and  $\delta$  in lung cells, **293**, 907
- Class II activator**  
role in IFN- $\gamma$  effects on HIV-1 replication in latently infected cells, **291**, 890
- Clast5/Stra13**  
negative regulation of B cell activation, **292**, 121
- Clathrin heavy chain**  
tyrosine phosphorylation under oxidative stress, **297**, 353
- Clitocybe nebularis**  
cysteine proteinase inhibitor folding, stability, and secondary structure, **297**, 962
- Clitocybin**  
folding, stability, and secondary structure (*Clitocybe nebularis*), **297**, 962
- CLOCK**  
repression of *mBmal1* transcription by BMAL1-CLOCK dimers, **290**, 933
- Clock genes**  
putative, expression in immortalized suprachiasmatic nucleus cells, **292**, 20  
role of functional CLOCK in entrainment of peripheral clocks to restricted feeding, **298**, 198
- Clofibrate**  
effect on UDP-glucuronosyltransferase activity toward bilirubin in primary rat hepatocyte culture, **291**, 29
- Clonorin**  
pore-forming, hemolytic activity and developmental expression, **296**, 1238
- Clostridium botulinum**  
toxin complex, nontoxic-nonhemagglutinin in, spontaneous nicking of, **292**, 434
- Clostridium botulinum** type E  
toxin of, complex with RNA, structure and identity of RNA species in, **291**, 154
- Clostridium kluyveri**  
diaphorase, catalysis of RDX biotransformation via N-denitration mechanism, **296**, 779
- c-mos**  
inactivation in mouse preimplantation embryos and oocytes using short interfering RNA, **296**, 1372
- c-myc**  
expression in HL-60 cells, effect of 4-hydroxynonenal, role of pRb/E2F pathway, **295**, 267  
suppression in Burkitt's lymphoma cells, **290**, 11
- CNT1**  
cell cycle-dependent regulation, **296**, 575



- Coactivators  
 role in transactivation through ER $\alpha$  and ER $\beta$  with ferutinine, **291**, 354
- Coactosin-like protein  
 molecular cloning and functional characterization (mouse), **290**, 783
- Coat protein III  
 phage, fusion system with, functional improvement of antibody fragments using, **298**, 566
- Cobalt  
 binding to active site residues in deblocking aminopeptidase from *Pyrococcus horikoshii*, **290**, 994  
 binding to cullin-2, **290**, 294  
 role in imide hydrolysis (pig), **297**, 1027
- Cocaine  
 effect on dopamine uptake and cell surface expression of dopamine transporters, **290**, 1545  
 effects in mice lacking Ca<sub>v</sub>2.3 ( $\alpha_{1E}$ ) calcium channel, **299**, 299
- Codon position  
 second, of *Vibrio cholerae* genes, base frequencies related to protein function, **290**, 81
- Codon usage  
 effect of use of tRNA<sub>AGA/AGG</sub> on efficiency of HU-IFN $\alpha$ 2, HU-IFN $\alpha$ 8, and HCV core protein expression in *E. coli*, **296**, 1303
- Coenzyme A  
 linking to biotin to form bisubstrate analog inhibitor of carboxylesterase component of acetyl-CoA carboxylase, **291**, 1213
- Coenzyme Q10  
 dietary, anti-atherogenic effects, non-antioxidant mechanism, **296**, 255
- Coenzymes  
 Konrad Bloch, evolution, and the RNA world, **292**, 1267
- Cofilin  
 phosphorylation, LIM-kinase-1 activity for, mitosis-dependent increase, **290**, 1315
- Cognate receptor  
 expression in rheumatoid synovial microcirculation (human), **297**, 890
- Cold  
 gene expression induced by, *Arabidopsis* DREBs involved in, DNA binding specificity and role of ERF/AP2 domain, **290**, 998
- Cold acclimation  
 induction of plant defensin-like gene clone *Tad1* (winter wheat), **298**, 46
- Cold shock response protein  
 Yfia, associated with ribosomes of *Escherichia coli*, solution structure, **299**, 710
- ColE7 operon  
 bactericidal, *ceiE7* mRNA of, specific cleavage, **299**, 613
- Colicin  
 membrane interacting segments, identification using viral fusion peptides, **293**, 1153
- Coliphage T2 DNA  
 interaction with bacterial DNA-binding protein HU: induction by HU of compact DNA form, **290**, 546
- Collagen  
 gels, contractile activity of human fibroblasts on, bovine lactoferrin region promoting, identification, **299**, 813  
 matrix remodeling by mesangial cells, mediated by  $\alpha$ 1 $\beta$ 1 integrin, stimulation by endothelin-1 (rat), **299**, 555  
 platelet signaling induced by, role of LAT, **292**, 916  
 pro  $\alpha$ 1 type I, C-propeptide region, interaction with thioredoxin (human), **295**, 663  
 turnover in subepithelial mesenchyme, coordinate facilitation by TGF- $\beta$ 1 and HGF, **297**, 255
- type I  
 expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- formation, increase by TGF- $\beta$  activity, enhancement by leptin (LX-1 cells), **297**, 906
- induction in primary hepatic stellate cells, prevention by pioglitazone, **291**, 55
- monomer flexibility, direct quantitation, **295**, 382
- vascular endothelial cell adhesion to, role in Ets-1 upregulation of MMP-1, **291**, 130
- type II  
 expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932  
 synthesis by adipose tissue-derived stromal cells, **290**, 763
- type IV, isoform expression in glomerular endothelial and mesangial cells (rat), **295**, 401
- type VI  
 C5 domain of  $\alpha$ 3 chain, cleavage from Col6 fibrils after secretion, **290**, 743  
 synthesis by adipose tissue-derived stromal cells, **290**, 763
- Collagenase-3  
 proximal promoter region, negative regulatory element AGRE identification (human), **291**, 1151
- Colletotrichum lindemuthianum*  
*PLS1*-related tetraspanin gene identification, **297**, 1197
- Colloidal gold  
 functionalized particles for single particle tracking experiments, **295**, 610  
 surface modification by, enhancement of DNA sensor sensitivity, **295**, 14
- Colon  
 amino acid transporter ATB<sup>0,+</sup> expressed in, transport of D-serine via, **291**, 291  
 butyrate transport, monocarboxylate transporter MCT1 involved in, genomic organization and promoter analysis (human), **292**, 1048  
 paracellular permeability, reduction by butyrate by enhancement of PPAR $\gamma$  activation, **293**, 827
- Colon adenocarcinoma  
 development in histidine decarboxylase-deficient mice, role of endogenous histamine synthesis, **297**, 1205
- Colon adenocarcinoma cells  
 p67<sup>phox</sup> homolog expressed in, giving recombinant p47<sup>phox</sup> O<sub>2</sub><sup>-</sup>-reconstituting ability to cytochrome *b*<sub>558</sub> (Caco-2 cells), **296**, 1322  
 and Peyer's patch cells, cocultures, evaluation as model of follicle-associated epithelia (Caco-2 cells), **299**, 377  
 vitamin D receptor-mediated CYP3A4 induction in, role of phosphorylation events (Caco-2 cells), **296**, 182
- Colon cancer cells  
 cAMP-dependent chloride conductance, mediation by pCLCA1, **298**, 531  
 CYP3A4 expression, modulation by ceramide (HT-29 cells), **298**, 687  
 CYP3A4 induction by liganded vitamin D receptor via DR3 and ER6 vitamin D responsive elements, **299**, 730  
 expression profile analysis in response to sulindac or aspirin, **292**, 498  
 growth, differentiation, and p21<sup>Waf1/Cip1</sup> and p27<sup>Kip1</sup> expression, effect of ZK 156718 (Caco-2 cells), **290**, 504  
 malignant properties, modulation by E-selectin (T84 cells), **293**, 1099  
 membrane topography of MHC-I and ICAM-1, rearrangement by interferon- $\gamma$ , **290**, 635  
 neurotensin receptor-3/sortilin luminal domain, shedding in HT29 cells, **298**, 760  
 P-glycoprotein upregulation by digoxin (Caco-2 cells), **292**, 190  
 radiation-induced apoptosis, augmentation by caspase-8 gene transduction (DLD-1 cells), **292**, 347
- Colon epithelial cells  
 E-cadherin-dependent polarity, stimulation by CAS/CSE 1 (HT-29 cells), **294**, 900

- paracellular permeability, effects of butyrate and PPAR $\gamma$  agonist (HT-29 cells), **293**, 827
- sodium butyrate-responsive genes in, identification, **293**, 1287
- Colon tumor cells
- peroxisome proliferator-activated receptor activity, suppression by docosahexaenoic acid (HCT 116 cells), **298**, 667
- Colon tumors
- age-dependent gene expression, analysis by oligonucleotide microarray data mining, **298**, 772
- Colony formation
- augmentation by FGF-2 in mouse marrow stromal cells, **290**, 526
- Colony-stimulating factor 1
- expression in human dendritic cells, modulation by vitamin D<sub>3</sub> and analogues, **297**, 1211
- Colony-stimulating factor 1 receptor
- expression in human dendritic cells, modulation by vitamin D<sub>3</sub> and analogues, **297**, 1211
- Colorectal cancer
- carcinogenesis, genes regulating, identification with algorithm for diagnosing malignant state, **296**, 497
- choline kinase overexpression, **296**, 580
- Colorectal cancer cells
- Adriamycin-induced downregulation of cyclin D1 expression, inhibition by p53 (DLD-1, SW620 cells), **290**, 1101
- expression of *MRP1* and *MRP3* and  $\gamma$ -glutamylcysteine synthetase genes, induction by NSAIDs, **290**, 1427
- p53–p21<sup>WAF</sup>–Bcl-2 network in, role of Cdx1 homeobox gene, **297**, 607
- Comamonas testosteroni*
- gene encoding steroid-inducible extradiol dioxygenase, identification, **294**, 560
- Co-metabolism
- chemotaxis of *Ralstonia* sp. SJ98 toward co-metabolizable nitroaromatic compounds, **299**, 404
- Comet assay
- DNA fragmentation in apoptotic human lymphocytes, **294**, 872
- Comparative genomic hybridization
- DNA array, gene amplification profiling of esophageal squamous cell carcinomas by, **296**, 152
- Complementary DNA, *see* cDNA
- Complementary triplets
- positions in whole bacterial chromosomes: analysis of bilateral inverse symmetry, **299**, 126
- Complementation groups
- peroxisome biogenesis-defective CHO cell mutants, isolation, **293**, 225
- Complement C7
- polymorphisms C7\*3 and C7\*4, molecular bases for, **298**, 450
- Complement system
- hemolytic factor dependent on, from *Loxosceles laeta* venom, molecular cloning and expression, **298**, 638
- Complex carbohydrates
- agglutinin with binding efficiency for, isolation from edible mushroom *Lyophyllum shimeiji* fruiting bodies, **290**, 563
- Compound I
- reaction with veratryl alcohol: spectrophotometric studies with hexa-coordinate ferric lignin peroxidase, **297**, 406
- Compound II
- reaction with veratryl alcohol: spectrophotometric studies with hexa-coordinate ferric lignin peroxidase, **297**, 406
- Compound III
- indole-3-acetic acid-dependent conversion to irreversibly inactivated HRP, effect of hypaphorine, **294**, 553
- Concanavalin A
- activation of macrophages, high intracellular myeloperoxidase activity in, **292**, 869
- Conditional knockout mice
- model mice for tissue-specific deletion of manganese superoxide dismutase gene, **296**, 729
- Confocal laser microscopy
- mitochondrial nitric oxide localization in H9c2 cells, **290**, 1010
- visualization of intracellular trafficking of exogenous DNA delivered by cationic liposomes, **298**, 591
- Conformation
- flat squared, in ascidiacyclamide derivative, production by chiral modification of oxazoline residue, **297**, 143
- $\beta$ -1,4-galactosyltransferase, changes upon substrate binding, biological implications, **291**, 1113
- inorganic pyrophosphatase, integrity of, role of C-terminal sequence (*Bacillus subtilis*), **290**, 806
- mutated extracellular domain of Fas, alteration of, in adult T cell leukemia cell line, **296**, 1251
- PMP70 on hepatic peroxisomal membranes, nucleotide-induced changes, **291**, 1245
- Rubisco, heat-induced change in, association with activity loss, **290**, 1128
- tripticin, antibiotic activity dependent on, **296**, 1044
- Congenital color vision deficiency
- missense mutations of red/green opsin genes in, **294**, 205
- Congenital heart disease
- Down syndrome and chimeric mice with, reduction in mcl-2a expression by extra human chromosome 21, **295**, 112
- Conjugated linoleic acid
- cis*-9,*trans*-11 and *trans*-10,*cis*-12 isomers, inhibition of stearoyl-CoA desaturase in MDA-MB-231 and MCF-7 breast cancer cells, **294**, 785
- Conjugation
- site-specific, [Cys<sup>5</sup>] $\mu$ -conotoxin GIIIA with BSA, generation of polyclonal antibodies to GIIIA using, **290**, 1037
- Vibrio cholerae*, frequency of, role of in vivo induced *icmF* gene, **295**, 922
- Connective tissue growth factor
- gene expression in chondrocytic cells, *cis*-element enhancing, **295**, 445
- Connective tissue growth factor/hypertrophic chondrocyte-specific gene product 24
- interaction with actin in chondrocytes, **299**, 755
- Connexin26
- frequency and functional studies of common alleles in hearing loss, **296**, 685
- Connexin30
- skin disease- and deafness-associated mutations, functional studies (human), **298**, 651
- Connexin31
- mutation causing erythrokeratoderma variabilis, lethal effect of expression in HeLa cells, **296**, 721
- Connexin40
- proximal promoter, activation by Sp1 and Sp3 (rat), **292**, 71
- $\mu$ -Conotoxin GIIIA
- polyclonal antibodies, generation using [Cys<sup>5</sup>]GIIIA immunogen site-specifically conjugated with BSA, **290**, 1037
- $\alpha$ -Conotoxin M1
- inhibition of  $\alpha$ - $\delta$  acetylcholine binding site of *Torpedo marmorata* receptor, **295**, 791
- Contact-inhibition
- mediation, role of  $\beta$ -catenin via change of subcellular localization, **292**, 195
- Contractile ring
- formation, role of Ca<sup>2+</sup>/calmodulin-dependent p85 binding to G-actin in *Tetrahymena*, **292**, 1098
- Cooperativity
- in cytochrome P450eryF, analysis with 1-pyrenebutanol, **294**, 806

- COPII vesicles  
budding from endoplasmic reticulum, relationship to unfolded protein response, **296**, 560  
formation from endoplasmic reticulum, genetic link to unfolded protein response, **296**, 568
- Copper  
apoplastocyanin site binding to, redesign allowing reversible protein folding, **296**, 988  
associated oxidative DNA strand breaks, potent inhibition by aspirin, **293**, 705  
cytochrome *b*<sub>558</sub> ferric/cupric reductase acting on, from rabbit duodenal brush border membranes, characterization, **291**, 220  
cytotoxicity in *Microsporium canis*, increase by fluconazole, **299**, 688  
*Dictyostelium discoideum* resistance to, role of Cu-ATPase, **291**, 476  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653  
inhibition of activated protein C, protective effect of human albumin and Cu-binding site analogue d-DAHK, **290**, 1388  
periplasmic handling in *Escherichia coli*, role of Pco proteins, **295**, 616  
role in damage of DNA by benzo[a]pyrene-7,8-dione, **290**, 778  
role in imide hydrolysis (pig), **297**, 1027  
role of NO binding to oxidized cytochrome *bo*<sub>3</sub> in reduction of Cu<sub>B</sub>, **296**, 1272
- Copper-containing enzyme  
identification of particulate methane monooxygenase from *Methylosinus trichosporium* as, **295**, 182
- Copper resistance  
role of Pco proteins in periplasmic copper handling in *Escherichia coli*, **295**, 616
- Corazonin receptor  
molecular cloning and functional expression (*Drosophila*), **298**, 31
- Core aldehydes  
phosphatidylcholine, hydrolysis to lysophosphatidylcholine by para-oxonase-1, **290**, 391
- Core protein  
hepatitis C virus  
expressed in *Pichia pastoris*, processing, **295**, 81  
expression efficiency in *E. coli*, effect of use of tRNA<sub>AGA/AGG</sub>, **296**, 1303  
innate form, role in core protein localization and function, **294**, 521  
in vitro self-assembled virus-like particles, induction of strong antibody response in sheep, **290**, 300  
subcellular localization, regulation of ability for p53 activation and p21 suppression, **294**, 528  
truncated, recombinant syndecan-1 minican with, expression and characterization, **290**, 146
- Coronary artery  
smooth muscle, membrane-bound guanylyl cyclase in, activation by resveratrol, **291**, 1218
- Coronary artery disease  
and obesity, increased plasma HB-EGF associated with, **292**, 781; *erratum*, **295**, 571
- Coronary endothelial cells  
in vitro transfer of antisense oligodeoxynucleotides by ultrasound into, **298**, 587
- Coronin-like protein p57  
reduction in fetal Down syndrome brain, **293**, 836
- Corpora cardiaca  
adipokinetic hormone III precursor-related peptide isolation and identification (*Locusta migratoria*), **296**, 1112
- Corpus callosum  
normal, in Emx1 mutant mouse with C57BL/6 background, **276**, 649; *erratum*, **296**, 1033
- Corpus luteum  
progesterone secretion, role of preovulatory rise of ovarian ornithine decarboxylase, **293**, 106
- Cortactin  
interaction with endothelial cell myosin light chain kinase, **298**, 511
- Corticotropin-releasing factor  
CRF<sub>1</sub> receptor desensitization induced by, GRK3 regulation during, **298**, 303  
release by hypothalamic explants, effects of centrally administered apelin-13 (rat), **291**, 1208
- Corticotropin-releasing factor receptor  
CRF<sub>1</sub>, desensitization induced by CRF and urocortin, GRK3 regulation during, **298**, 303
- Cotton fibers  
elongating,  $\beta$ -tubulin-like cDNA expressed specifically in, induction of longitudinal growth of fission yeast, **296**, 1245
- Coumarin  
metabolism, differences among *CYP2A6*\*7, \*8, and \*10 alleles, **290**, 318
- N*-Coumaroyltyramine  
synthesis and arrest of human transformed cells via protein-tyrosine kinase inhibition, **292**, 1104
- Courtship behavior  
associated protein Yellow, immunohistochemical colocalization with male-specific Fruitless in *Drosophila melanogaster* neuroblasts, **293**, 1262
- Covalent immobilization  
DNA on polymer-shielded silver-coated quartz crystal microbalance using photobiotin-based UV irradiation, **290**, 962
- CpG methylation  
association with differentiation of trophoblast lineage, **290**, 701  
role in epigenetic regulation of RANKL gene expression (mouse), **293**, 126
- CpG motif  
role in macrophage secretion of inflammatory cytokines induced by plasmid-cationic liposome complex, **293**, 344
- CpG oligonucleotides  
with phosphodiester linkages, immunostimulatory properties in vitro and in vivo, **297**, 83
- CPI17  
phosphorylation by p21-activated kinase (rat), **297**, 773
- C-propeptide region  
human pro  $\alpha$  1 type I collagen, interaction with thioredoxin, **295**, 663
- CR1 gene  
AML1-mediated transactivation, correlation with cellular localization of TEL/AML1 fusion protein, **297**, 91
- Cra-box  
adhE promoter, mutations in, role in extensive overproduction of AdhE protein by *rng* mutations, **295**, 92
- c-Raf-1  
ubiquitin-dependent degradation by proteasome, protection by cell adhesion, **294**, 976
- cra* gene  
mutations, role in extensive overproduction of AdhE protein by *rng* mutations, **295**, 92
- C-reactive protein  
human recombinant, phosphorylcholine-binding, secretory production in *E. coli*, **295**, 163
- Creatine  
direct antioxidant properties, **290**, 47
- Creatine kinase  
functional properties and [Ca<sup>2+</sup>]<sub>i</sub> metabolism in myocardium (mouse), **298**, 163
- CREB  
binding of DNA, activation by 50-Hz magnetic field in HL60 cells, dependence on Ca<sup>2+</sup>, **296**, 1013



- promoter, phase-gated induction by glutamate in immortalized suprachiasmatic nucleus cell line, **298**, 133
- regulation by nociceptin/orphanin FQ in dopaminergic SH-SY5Y cells, **291**, 663
- CREB-binding protein
- direct DNA binding activity, and stimulation of transcription factor DNA binding through small domains, **296**, 118
  - interaction with NF- $\kappa$ B in activated microglia, inhibition by VIP and PACAP, **297**, 1181
- CREB-related protein
- physical interaction with hepatitis C virus NS4B protein, **299**, 366
- Cre/loxP system
- conditional gene targeting with, Flp recombinase transgenic C57BL/6 mouse strain for, **293**, 953
- Critical illness
- arteriovenous carboxyhemoglobin difference in, **299**, 479
- CrkL
- role in type I interferon-dependent gene transcription and activation of small G-protein Rap1, **291**, 744
- Crohn's disease
- quantitative analysis of human glucocorticoid receptor  $\alpha/\beta$  mRNA in, **296**, 1286
- Cromolyn
- interactions with S100 proteins: identification of putative drug binding sites, **292**, 1023
- crooked-neck protein
- co-fractionation in multiprotein complex with splicing factors (*Drosophila melanogaster*), **296**, 288
- Crosslinking
- histones, by transglutaminase, **293**, 1453
- Crotonase, *see* Enoyl-CoA hydratase
- CRP3
- binding by putative mammalian D-lactate dehydrogenases, **295**, 910
- CRY1
- upregulation of BMAL1, **290**, 933
- CRY2
- upregulation of BMAL1, **290**, 933
- Cryptorchidism
- experimental, downregulation of p59<sup>scr</sup> mRNA expression (mouse), **292**, 992
- Crystal growth
- hydroxyapatite, inhibition by bone proteoglycans and components, **292**, 727
- $\alpha$ A-Crystallin
- and  $\alpha$ B-crystallin, comparison under thermal and UV stresses, **295**, 854
  - lens, decreased subunit exchange after heat treatment, **293**, 7
- $\alpha$ B-Crystallin
- and  $\alpha$ A-crystallin, comparison under thermal and UV stresses, **295**, 854
  - expression in lens epithelial cells, induction by inhibition of Rho-kinase, **294**, 981
  - thermostability and chaperone-like function, enhancement by C-terminal lysine truncation (pig), **297**, 309
- $\zeta$ -Crystallin
- selectivity for salicylic acid over aspirin, **293**, 440
- Crystallization
- C-terminally truncated copper-containing nitrite reductases from *Achromobacter cycloclastes*, **299**, 173
  - manganese superoxide dismutase from *Bacillus halodenitrificans*, **294**, 60
  - $\beta$ -nerve growth factor (cobra venom), **297**, 1008
  - Smaug RNA-binding domain, **297**, 1085
- Crystal packing
- C-terminally truncated copper-containing nitrite reductases from *Achromobacter cycloclastes*, **299**, 173
- Crystal structure
- human methemalbumin at 1.9 Å resolution, **291**, 813
  - liganded anti-gibberellin A<sub>4</sub> antibody 4-B8(8)/E9 Fab fragment, **293**, 489
- Csfl
- encoding macrophage colony-stimulating factor, mutation in, induction of osteopetrosis in *tl* rat, **294**, 1114
- csmA* gene
- translation as single polypeptide and regulation by osmotic conditions (*Aspergillus nidulans*), **298**, 103
- c-Src
- direct phosphorylation of focal adhesion kinase, **294**, 293
  - increased activity in fibroblasts transformed by v-*src* oncogene, **290**, 790
- Csx/Nkx2-5
- dual effects on cardiomyocytes, **298**, 493
- CT120* gene
- molecular cloning and characterization, **297**, 528
- CTCF-complex
- interaction with Smads, role in TGF- $\beta$ -induced APP gene transcription in astrocytes, **295**, 713
- C-terminal amide
- peptide amidicin with, identification (porcine cardiac atrium), **293**, 741
- C-terminal c-Src kinase
- increased activity in fibroblasts transformed by v-*src* oncogene, **290**, 790
- C-terminal truncation mutant
- lysine-truncated, porcine  $\alpha$ B-crystallin, enhanced thermostability and chaperone-like function, **297**, 309
- CTG repeats
- expanded, inhibition of neuronal differentiation of PC12 cells, **295**, 289
- Cu-ATPase
- role in *Dictyostelium discoideum* resistance to copper, **291**, 476
- Cullin-2
- cobalt- and nickel-binding property, **290**, 294
- Curcumin
- anti-angiogenic effect, molecular mechanisms (EAT cells), **297**, 934
  - reactive oxygen species scavenging or quenching properties, **295**, 62
- CXCL8/IL-8
- cellular responses to, antagonism by CXCL8<sub>(3-73)</sub>K11R/G31P, **293**, 939
- CXCL16
- gene expression profile in liver during bacteria-induced fulminant hepatitis, analysis by cDNA microarray system, **298**, 675
- CXCR1
- neutrophil, ligand binding, antagonism by CXCL8<sub>(3-73)</sub>K11R/G31P, **293**, 939
- CXCR2
- neutrophil, ligand binding, antagonism by CXCL8<sub>(3-73)</sub>K11R/G31P, **293**, 939
- Cyanide
- binding to cd, nitrite reductase from *Pseudomonas aeruginosa*: role of active site His369 in ligand stabilization, **291**, 1
  - binding by heme-regulated phosphodiesterase from *Escherichia coli*, effect of Met95 mutations, **299**, 169
- Cyanobacteria
- paralogous *ppa* genes encoding Family I pyrophosphatases, expression and inactivation, **295**, 890
  - small heat-shock protein gene, imperfect inverted repeat in, specific binding of protein to, **297**, 616
- Cyanovirin-N
- domain-swapped dimer in solution, two sets of oligosaccharide binding sites in, **298**, 598
  - mutant, domain-swapped structure of, **294**, 184

- stable dimeric mutant from T7 phage-displayed CV-N mutant library, **292**, 1036
- Cyclic ADP-ribose  
calcium response during maturation and fertilization of starfish oocytes, **290**, 1015
- Cyclic AMP  
chloride conductance dependent on, mediation by pCLCA1 in Caco-2 cells, **298**, 531  
exocytosis regulated by, in parotid acinar cells, role of phospholipase D (rat), **299**, 663  
formation in cultured calvarial osteoblasts, inhibition by GABA<sub>B</sub> receptor agonist, **293**, 1445  
induction of hepatic mitochondrial ornithine/citrulline transporter mRNA, **294**, 749  
levels, increase by phosphodiesterase 4 inhibitors, **290**, 663  
modulation of proximal SREBP-1c promoter in rat hepatocytes, **290**, 256  
potassium channels activated by, in guinea pig gallbladder epithelial cells, **290**, 1564  
production by ligand-dependent activation of melanocortin 5 receptor, **290**, 844  
Ras/cAMP/PKA pathway, regulation of mitochondrial enzyme content of respiratory competent yeast, **293**, 1383
- Cyclic AMP receptor protein-like protein  
role in expression of *Xanthomonas campestris* protease 1, **295**, 43; *erratum*, **296**, 1034
- Cyclic AMP response element binding factor, *see* CREB
- Cyclic AMP-response element-binding protein-related protein  
physical interaction of CREB-RP/ATF6 $\beta$  with hepatitis C virus NS4B protein, **299**, 366
- Cyclic AMP-responsive element  
transcription mediated by, role in enhanced GTP cyclohydrolase I expression in V-1-overexpressing cells, **293**, 962
- Cyclic GMP  
content in cardiac tissue, effects of plant histaminase (guinea pig), **296**, 840  
mediation of atrial natriuretic peptide regulation of NF- $\kappa$ B pathway, **295**, 1068  
production in endothelial cells, upregulation associated with exposure to oscillatory shear, **293**, 1466  
synthesis in smooth muscle cells, effect of YC-1, **291**, 1014
- Cyclic GMP-dependent protein kinase  
inhibition, effects on spontaneous apoptosis of neutrophils, **297**, 498  
inhibitors of, modulation of glutamate response in immortalized suprachiasmatic nucleus cell line, **298**, 133
- Cyclic GMP-dependent protein kinase II  
inhibition by cGK II splice isoform, **293**, 1438
- Cyclic nucleotide-gated channel  
tandem dimers, analysis of binding symmetry of extracellular divalent cations to conduction pore, **298**, 478
- Cyclic nucleotide phosphodiesterase  
plant, yeast, and *E. coli*, biochemical characterization, **291**, 875
- Cyclic nucleotide phosphodiesterase 4  
cAMP-specific, inhibitors of, promotion of ABCA1 expression and cholesterol efflux, **290**, 663
- Cyclic peptides  
SFTI-1 trypsin inhibitor isolated from sunflower seeds, and analogues, chemical synthesis and kinetic study, **292**, 855
- Cyclic uniaxial strain  
activation of G proteins in human endothelial cells, **299**, 258
- Cyclin A  
ratio to p21WAF1, relationship to breast carcinoma apoptosis (MCF-7 cells), **297**, 943
- Cyclin B3  
molecular cloning, gene localization, and structure (human), **291**, 406
- Cyclin D  
anchoring sites on SSeCKS, **290**, 1368  
induction in primary osteoblasts by estrogen: activation of cyclin-dependent kinases 4 and 6 (rat), **299**, 222
- Cyclin D1  
expression  
in human cancer cells, Adriamycin-induced downregulation of, inhibition by p53, **290**, 1101  
induction of hypertrophic growth of cardiomyocytes, implications for cardiac hypertrophy, **296**, 274  
levels, reduction by downregulation of Wilms' tumor 1 protein, **295**, 784  
overexpression, effect on TGF- $\beta$ -induced inhibition of hepatocellular carcinoma cell growth, **292**, 383  
thrombin-induced expression in airway smooth muscle cells, reduction by tyrosine kinase inhibitors (guinea pig), **293**, 72  
ubiquitination, reduction in UVB-induced murine squamous cell carcinomas, **298**, 377
- Cyclin-dependent kinase  
activation, role in LIM-kinase-1 activation, **290**, 1315
- Cyclin-dependent kinase 4  
activation by estrogen via cyclin D induction in primary osteoblasts (rat), **299**, 222  
expression, induction of hypertrophic growth of cardiomyocytes, implications for cardiac hypertrophy, **296**, 274
- Cyclin-dependent kinase 5  
activator p35, cleavage to p25, role in tau hyperphosphorylation, **298**, 693  
complexed with roscovitine, molecular model, **297**, 1154
- Cyclin-dependent kinase 6  
activation by estrogen via cyclin D induction in primary osteoblasts (rat), **299**, 222
- Cyclin-dependent kinase 9  
inhibition by flavopiridol, structural basis, **293**, 566
- Cyclin-dependent kinase inhibitor  
p57<sup>Kip2</sup>, pro-apoptotic effect on staurosporine-induced apoptosis in HeLa cells, **296**, 702
- Cyclin E  
overexpression, effects on homologous recombination in Chinese hamster cells, **296**, 363
- Cyclin H  
as binding partner for protein kinase CK2, **296**, 13  
effects on HIV-1 Vpr glucocorticoid receptor coactivator activity and cell cycle arresting activity, **298**, 17
- Cyclin kinase  
inhibitor p21, ubiquitination, regulatory region required for, **293**, 120
- Cyclins  
inhibition after hepatectomy in rats with thioacetamide-induced liver cirrhosis, **292**, 474
- $\beta$ -Cyclodextrin  
Alzheimer's b-amyloid peptide interaction with, NMR and CD studies, **297**, 1011
- Cyclodextrinase  
*Thermotoga maritima* amyolytic enzyme resembling, liberation of glucose from reducing end of substrates, **295**, 818
- Cyclodextrin glucanotransferase  
synthesis of oligosaccharides structurally related to repeating unit of pullulan using, **297**, 382
- Cycloheximide  
effect on blockade upstream of caspase cascade in Fas-resistant HTLV-I-infected T cells, **294**, 714
- Cyclooxygenase  
inhibitors of, effects on Ca<sup>2+</sup> influx in erythrocytes, **293**, 974  
mRNA expression in hair follicles (mouse), **290**, 696
- Cyclooxygenase-2  
expression  
in articular chondrocytes, regulation by  $\beta$ -catenin, **296**, 221



- in fibroblasts, induction by pyrrolidine dithiocarbamate (NIH 3T3 cells), **298**, 230
- in osteoblasts, induction by fluid flow via PKA signaling pathway (MC3T3-E1 cells), **297**, 46
- regulation by retinoic acid-inducible gene I, and RIG-I induction by LPS in endothelial cells, **292**, 274
- increase of angiogenic and metastatic potential of tumor cells, **299**, 886
- related pathway, correlation with nitric oxide pathway in head and neck squamous cell carcinomas, **299**, 517
- selective oxygenation of *N*-arachidonylglycine, **296**, 612
- Cyclooxygenase-2 inhibitor
- NS-398, inhibition of  $\alpha$ -smooth muscle actin expression in hepatic stellate LI90 cells, **297**, 1128
- (Cys)2(His)2 zinc finger
- with SCAN box, transcription factor *ZNF323* containing, in early human embryonic development, **296**, 206
- Cystathionine  $\beta$ -synthase
- activity in brain, reduction in Alzheimer's disease, **293**, 1485
- Cystatin
- sugarcane, recombinant expression, purification, and antifungal activity, **296**, 1194
- Cysteine
- C-terminal, role in folding of neprilysin/CD10, **295**, 423
- extra- and intracellular targets for RET kinase activation, **292**, 826
- ligand, of zinc finger proteins, amino acid number between, effect on DNA binding affinity/specificity, **296**, 553
- membrane-located residues, retinitis pigmentosa-associated rhodopsin mutations, biochemical phenotypes, **297**, 847
- two residues in paired domain of Pax-8, oxidoreductive modification by Ref-1, regulation of DNA-binding, **297**, 288
- Cysteine protease inhibitor
- folding, stability, and secondary structure (*Clitocybe nebularis*), **297**, 962
- sugarcane cystatin, recombinant expression, purification, and antifungal activity, **296**, 1194
- Cysteine string protein
- downregulated expression in pancreatic islets of diabetic GK rat, **291**, 1038
- Cystic fibrosis transmembrane conductance regulator
- functional, with  $\Delta F508$  mutation, induction in airway epithelial cells by *S*-nitrosoglutathione, **297**, 552
- Cytochrome *b*
- mitochondrial gene polymorphisms in young obese adults, **290**, 1199
- Cytochrome *b*<sub>558</sub>
- O<sub>2</sub><sup>-</sup>-reconstituting ability, conferral by Caco-2 cell-expressed p67<sup>phox</sup> homolog with recombinant p47<sup>phox</sup>, **296**, 1322
- Cytochrome *b*<sub>558</sub> ferric/cupric reductase
- rabbit duodenal brush border membrane, characterization, **291**, 220
- Cytochrome *bo*<sub>3</sub>
- from *Escherichia coli*, nitric oxide binding to and turnover by, **296**, 1272
- Cytochrome *c*
- and paracrine repercussions of preconditioning on angiogenesis and apoptosis of endothelial cells, **291**, 261
- release from mitochondria
- Ca<sup>2+</sup> signal upstream of, detection during apoptosis in HeLa cells, **299**, 762
- effect of 9- $\beta$ -D-arabinofuranosylguanosine (human), **298**, 338
- role in lipoxygenase inhibitor-induced apoptosis in breast cancer cells, **296**, 942
- selenite-induced, in liver (rat), **294**, 1130
- TNF-induced, promotion by DNA fragmentation factor expression, **290**, 796; *erratum*, **291**, 191
- tributyltin-induced, mechanisms, **292**, 904
- Cytochrome P450
- expression in whole skin and cultured epidermal keratinocytes (rat), **297**, 65
- hepatic microsomal, farnesol as inhibitor and substrate (rabbit), **293**, 1
- pentachlorophenol-induced, constitutive expression of immunoidentical forms (*Euglena gracilis*), **298**, 277
- phenobarbital induction of, relationship to cholesterol levels, **291**, 378
- reduced expression associated with CAR and PXR repression in liver during acute phase response (mouse), **293**, 145
- role in biosynthesis of  $\beta$ -substituted furan cytoskeleton in lower furanoterpenoids, **290**, 589
- selective inhibitors, effects on *N*-acetyl-*p*-benzoquinone-imine formation from acetaminophen, **291**, 1089
- Cytochrome P450 1A1
- gene induction, characterization by DNA microarray and  $\alpha$ -naphthoflavone, **296**, 172
- induction by 3-methylcholanthrene, serum-induced increase, **297**, 249
- negative regulatory element, nuclear protein binding to, specificity of, **296**, 799
- Cytochrome P450 1A2
- constitutive gene expression, enhancer elements for, identification (mouse), **297**, 1297
- gene induction, characterization by DNA microarray and  $\alpha$ -naphthoflavone, **296**, 172
- Cytochrome P450 1B1
- gene polymorphisms associated with prostate cancer risk, **296**, 820
- Cytochrome P450 2A6
- CYP2A6*\*7, \*8, and \*10 alleles, in vivo pilot study characterizing, **290**, 318
- Cytochrome P450 2B1
- gene promoter for, regulation by glucocorticoids via C/EBP $\beta$  and  $\delta$  in lung cells, **293**, 907
- Cytochrome P450 2B1/B2
- hepatic, gene 5'-proximal region, cytosolic proteins interacting with, phenobarbitone-mediated translocation into nucleus (rat), **292**, 312
- Cytochrome P450 2C8
- and *CYP2C9*, genetic polymorphisms, linkage between, **299**, 25
- Cytochrome P450 2C9
- and *CYP2C8*, genetic polymorphisms, linkage between, **299**, 25
- Cytochrome P450 2D6.10
- in hepatic microsomes, catalytic activity and thermal stability (human), **293**, 969
- Cytochrome P450 2E1
- upregulation in Kupffer cells by chronic ethanol feeding, **294**, 849
- Cytochrome P450 2H1
- basal and phenobarbital-inducible expression, effects of squalenstatin 1, oxysterols, and bile acids, **291**, 378
- Cytochrome P450 3A4
- expression in colon carcinoma HT-29 cells, modulation by ceramide, **298**, 687
- induction
- interindividual variability, role of pregnane X receptor splicing variants in liver (human), **298**, 433
- in intestinal and colon cancer cells by liganded vitamin D receptor via DR3 and ER6 vitamin D responsive elements, **299**, 730
- vitamin D receptor-mediated, in Caco-2 cells, effect of alteration of cellular phosphorylation state, **296**, 182
- Cytochrome P450 3A37
- basal and phenobarbital-inducible expression, effects of squalenstatin 1, oxysterols, and bile acids, **291**, 378
- Cytochrome P450 4A1
- induction by peroxisome proliferator, **299**, 832
- Cytochrome P450 4X1
- brain-specific, identification, **296**, 677



- Cytochrome P450 7A1  
transcription, LXR $\alpha$  as dominant regulator of, **293**, 338
- Cytochrome P450 24  
gene, characterization of transgenic rats constitutively expressing, **297**, 1332
- Cytochrome P450ALK1  
*YIALK1* encoding, transcriptional induction by *n*-alkane via distinct *cis*-elements on promoter (*Yarrowia lipolytica*), **294**, 1071
- Cytochrome P450eryF  
allosteric mechanisms, analysis with 1-pyrenebutanol, **294**, 806
- Cytochrome P450 system  
role in allylic hydroxylation of 4-methyl-2-cyclohexenone, **297**, 202
- Cytochromes  
mitochondrial, content in respiratory competent yeast, effects of Ras cascade activation, **293**, 1383
- Cytokeratin 19  
expression status in liver epithelial cells cocultured with hepatic stellate cells, **293**, 1420
- Cytokine-induced neutrophil chemoattractant  
role in enhancement by dexamethasone of LPS-induced neutrophil accumulation in mouse lung, **294**, 1101
- Cytokine-inducible protein  
CIP29, proliferation-associated, cloning and characterization, **292**, 593
- Cytokine receptor  
 $\gamma$  chain, alternatively spliced isoform, identification (chicken), **299**, 321
- Cytokines  
anti-inflammatory antioxidant, interleukin-10 as, **297**, 163  
gene expression by immature and mature bone marrow-derived dendritic cells, analysis using DNA arrays, **290**, 66  
gene expression profile in liver during bacteria-induced fulminant hepatitis, analysis by cDNA microarray system, **298**, 675  
inflammatory, secretion by macrophages, CpG motif-independent induction by plasmid-cationic liposome complex, **293**, 344  
local expression in mouse experimental tumor model, histamine H<sub>2</sub> receptor-mediated modulation, **297**, 1205  
mediation of superantigen-induced tumor cell apoptosis, **290**, 1336  
proinflammatory  
redox regulation of, **296**, 847  
ST2 protein induced by, modulation of acute lung inflammation, **299**, 18  
related receptor-mediated signaling pathways, **297**, 700  
stimulation of osteoprotegerin secretion from prostate cancer cells, **293**, 451
- Cytokinesis  
*Dictyostelium*, role of Rho GDP-dissociation inhibitor, **296**, 305  
initiation in *Tetrahymena*, regulation by Ca<sup>2+</sup>/calmodulin-dependent p85 binding to G-actin, **292**, 1098
- Cytokinin  
responses, effects of overexpression of *Arabidopsis* response regulators ARR4/ATRR1/IBC7 and ARR8/ATRR3, **293**, 806
- Cytolysin  
*Vibrio vulnificus*, induction of nitric oxide synthase expression, **290**, 1090
- Cytophaga* sp. KUC-1  
thermostable aldehyde dehydrogenase, characteristics and functional properties, **298**, 632
- Cytoplasmic granules  
CD8<sup>+</sup> cytotoxic T cells and natural killer cells, Fas ligand localization in, **296**, 328
- Cytosensor  
monitoring of extracellular acidification in INS-1 and HIT-T15  $\beta$ -cell lines and insulin secretion, **293**, 1168
- Cytosine arabinoside  
cytotoxicity in cells transduced with deoxycytidine kinase gene, **293**, 1478
- induction of blood leukocyte apoptosis, effects of p53 codon 72 genotype, **299**, 539
- Cytoskeleton  
actin, *see* Actin cytoskeleton  
chondrocyte, actin in, interaction with CTGF/Hcs24, **299**, 755  
ErbB1 and ErbB2 association during keratinocyte differentiation, **295**, 1108  
erythrocyte, changes in NIDD patients and protective effects of *N*-acetylcysteine, **290**, 1393  
4-hydroxynonenal-induced modifications in osteosarcoma cells, **293**, 1502  
mechanics, control of, requirement of intact vinculin protein for, **290**, 749  
neutrophil, rapid adjustment of, CD-31 priming for, **292**, 1092  
organization, regulation by CIP4 via structural-functional differences in tissue-specific manner, **293**, 1426  
rearrangement, and interaction of cortactin with endothelial cell myosin light chain kinase, **298**, 511  
reorganization, linkage to ceramide formation by LIM kinase-1, **298**, 408  
Rho-GTPase activating protein, human gene ARHGAP10 coding for, **294**, 579
- Cytoskeleton-integrin linkage  
during platelet aggregation, possible role of ILK-affixin complex, **297**, 1324
- Cytotoxicity  
 $\beta$ -amyloid peptide, inhibitors composed of KLVFF recognition element and flexible hydrophilic disrupting element, **290**, 121  
9- $\beta$ -D-arabinofuranosylguanine, acquired resistance to, role of low mitochondrial deoxyguanosine kinase level, **293**, 1489  
5-aza-2'-deoxycytidine, cytosine arabinoside, and 2,2'-difluorodeoxycytidine in cells transduced with deoxycytidine kinase gene, **293**, 1478  
copper to *Microsporium canis*, increase by fluconazole, **299**, 688  
fatty acid synthase inhibition, in breast cancer cells, **285**, 217; *erratum*, **295**, 570  
granule exocytosis model, Fas ligand participation in, **296**, 328  
4-hydroxynonenal in osteosarcoma cells (human), **293**, 1502  
interferon- $\gamma$  and TNF- $\alpha$  for vascular endothelial cells, role of nitric oxide, **291**, 780  
natural killer cells, impairment in leptin receptor-deficient mice, **298**, 297  
*Vibrio mimicus* phospholipase A to fish cell line, **298**, 269
- Cytotoxic T cells  
CD8<sup>+</sup>, Fas ligand localization in cytoplasmic granules, **296**, 328  
K<sup>b</sup>-restricted epitope, pH-sensitive liposomes encapsulated with, in vivo antigen delivery route and immune boosting effects, **292**, 682  
mediation of superantigen-induced tumor cell apoptosis, **290**, 1336
- D
- Dahl salt  
atrial myocytes in rat sensitive to, V-1 expression in, enhancement by hypertension, **298**, 793
- DAN  
p73-dependent expression during cisplatin-induced cell death and osteoblast differentiation, **295**, 501
- DAP3, *see* Death-associated protein 3
- DAP12  
ITAM motif, regulation of differentiation and apoptosis in M1 leukemia cells, **291**, 296
- Daunorubicin  
inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334

- DAX1**  
cDNA, molecular cloning and expression patterns in Nile tilapia, **297**, 632
- Daxx**  
modification by small ubiquitin-related modifier-1, **295**, 495
- dbf** gene cluster  
dispersion on *Terrabacter* sp. DBF63 genome, **296**, 233
- DBL**  
alternative splicing variants, **299**, 455
- Dbl's Big Sister**  
role in anti-mitogenic pathway from  $\alpha 1B$ -adrenergic receptor to c-Jun N-terminal kinase, **296**, 85
- Dcn**  
imprinted gene identified by high-throughput screening using RIKEN cDNA microarray, **290**, 1499
- DCNP1**  
identification and immunocytochemical analysis, **290**, 1022
- Dcytb**  
rabbit homologue: cytochrome *b*<sub>558</sub> ferric/cupric reductase from duodenal brush border membranes, **291**, 220
- d-DAHK**  
protective effect against copper-induced inhibition of activated protein C, **290**, 1388
- Ddi1**  
cooperative role with Rpn10 in ubiquitin-dependent proteolysis, **293**, 986
- Deacetoxycephalosporin C synthase**  
recombinant, active site mutations, **292**, 66  
*Streptomyces clavuligerus*, C-terminal modification and enzyme activity, **295**, 15
- Deacetylation**  
histones, silencing of maspin gene in breast cancer, **297**, 125
- Deafness**  
connexin 30 mutations associated with, functional studies (human), **298**, 651  
genetic, frequency and functional studies of common connexin26 alleles in, **296**, 685  
mitochondrial DNA A1555G mutation associated with, pathogenesis of, **293**, 521
- Death-associated protein 3**  
functional interaction with glucocorticoid receptor, **295**, 749  
relationship to TRAIL-induced apoptosis (Jurkat cells), **297**, 880
- Death effector domain**  
DED-only polypeptides of caspase-8 and caspase-10, inhibition of death receptor-induced cell death, **291**, 484
- Death-inducing signalling complex**  
role in lipid rafts in Fas-induced apoptosis (human), **297**, 876
- Death receptor**  
cell death induced by, inhibition by death effector domain-only polypeptides of caspase-8 and caspase-10, **291**, 484  
TVB, DR5-like, expression in hen ovarian follicles, **291**, 226
- Deblocking aminopeptidase**  
from *Pyrococcus horikoshii*, active site, **290**, 994
- Decay**  
role of single amino acid mutation in rapid inactivation of epithelial  $Ca^{2+}$  channels, **291**, 278
- Decorin**  
expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932  
glycosaminoglycan chains in, reconstruction, **297**, 1167
- Decoy**  
double-strand DNA oligomer for NF- $\kappa$ B, inhibition of TNF- $\alpha$ -induced ICAM-1 expression in sinusoidal endothelial cells, **298**, 10  
transcription factor, against estrogen receptor  $\alpha$  gene, osteoblastic differentiation induced by, **292**, 761
- Dedifferentiation**  
and redifferentiation, sequential, in tissue engineering, growth factors for, **294**, 149  
thyrocytes, associated enhanced expression of plasminogen activator inhibitor-1, **295**, 737
- DEFB1** gene  
polymorphism, hBD-1(Ser35) peptide derived from, structural and functional characterization, **293**, 586
- Defense-related genes**  
pathogen-induced, in Chinese cabbage, isolation by subtractive hybridization using selective adaptor ligation, **299**, 352
- Defense/stress response**  
rice seedlings, role of octadecanoid signaling components, **295**, 1041
- Defensin**  
plant, gene related to, induction during cold acclimation (winter wheat), **298**, 46
- $\beta$ -Defensin-1**  
genetic variants, association with chronic obstructive pulmonary disease, **291**, 17
- $\beta$ -Defensins**  
DEFB1 gene encoding, hBD-1(Ser35) peptide derived from polymorphism of, structural and functional study, **293**, 586
- Degranulation**  
neutrophil, and phospholipase D activity, differential regulation of, **292**, 951
- Dehydration**  
gene expression induced by, *Arabidopsis* DREBs involved in, DNA binding specificity and role of ERF/AP2 domain, **290**, 998
- Dehydroascorbate reductase**  
related activity in ebselen, **291**, 550
- Dehydroepiandrosterone sulfate**  
modulation of angiotensin II-induced protein kinase C activity in anterior pituitary, gender differences (rat), **294**, 95
- Deimination**  
arginine residues in nucleophosmin/B23 and histones in HL-60 granulocytes, **290**, 979
- Demethylation**  
DNA, association with differentiation of trophoblast lineage, **290**, 701
- Dendritic cell nuclear protein 1**  
identification and immunocytochemical analysis, **290**, 1022
- Dendritic cells**  
activation and suppression of renin-angiotensin system in, **296**, 194  
bone marrow-derived, immature and mature, DNA array analysis of gene expression profiles, **290**, 66  
colony-stimulating factor 1 and receptor, expression of, modulation by vitamin D<sub>3</sub> and analogues, **297**, 1211  
DCNP1 identification and immunocytochemical analysis, **290**, 1022  
follicular, from knock-in mouse, bioassay for human prions with, **294**, 280  
modulation by vitamin D<sub>3</sub> and glucocorticoid pathways, **297**, 645  
plasmid DNA uptake and degradation, mechanism, **299**, 389
- N-Denitration**  
role in RDX biotransformation catalyzed by diaphorase, **296**, 779
- Dentatorubral pallidolusian atrophy**  
enhanced SUMOylation in, **293**, 307
- Deoxazoline-ascidiacyclamide**  
with 10*S*, 11*S*, 37*R*, and 38*R* configurations, flat squared conformation, **297**, 143
- Deoxycytidine kinase**  
association with acquired resistance to 9- $\beta$ -D-arabinofuranosylguanine cytotoxicity, **293**, 1489  
gene encoding, cells transduced with, toxic effects of 5-aza-2'-deoxycytidine, cytosine arabinoside, and 2,2'-difluorodeoxycytidine, **293**, 1478
- Deoxydoxorubicin**  
C-13, effects on ryanodine receptor gene expression, **291**, 433



- Deoxyguanosine kinase  
mitochondrial, role in acquired resistance to 9- $\beta$ -D-arabinofuranosylguanine cytotoxicity, **293**, 1489
- 15-Deoxyprostaglandin J<sub>2</sub>  
inhibition of PDGF-A and -B chain expression in human vascular endothelial cells independent of PPAR $\gamma$ , **298**, 128
- 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J<sub>2</sub>  
effect on Fc $\epsilon$ RI expression in human basophilic KU812 cells, **297**, 193  
inhibition of IgE heavy chain germline transcript expression in DND39 B cells, **295**, 547
- Deoxyribonuclease  
pseudorabies virus, functional interaction of PRV DNA-binding protein with, **293**, 1301
- Deoxyribonuclease II  
gene upregulation during myelomonocytic differentiation of HL-60 and THP-1 cells, **296**, 48
- Deoxyribonuclease II $\alpha$   
active form, structure (human), **292**, 415
- 2-Deoxy-D-ribose  
effects on Fas-induced apoptosis, **295**, 300  
inhibition of hypoxia-induced apoptosis, molecular basis, **291**, 806
- Dephosphorylation  
Akt, and oxLDL-induced cell death mediated by LOX-1 expressed in cultured rat chondrocytes, **299**, 91  
Bcl-2 after prolonged mitotic arrest induced by paclitaxel, role of PP1 phosphatase, **294**, 504  
STAT3, TC-PTP regulation of interleukin-6-mediated signaling pathway via, **297**, 811  
Tetex2-related dynein light chain by type 2A protein phosphatase (rainbow trout), **297**, 800
- Depolarization  
effect on intracellular Ca<sup>2+</sup> levels in cultured chick myoblasts, **290**, 1176  
membrane potential, by  $\beta$ -lactams: induction of cell wall autolysis, **290**, 1169
- Dermal papilla  
prostaglandin E<sub>2</sub> receptor subtype expression (mouse), **290**, 696
- Dermal papilla cells  
activation, fibroblast growth factor 5 inhibition of hair growth by blocking of, **290**, 169  
human hair, IFN- $\beta$  secreted from, inhibition of growth of outer root sheath cells in vitro, **290**, 1133
- Dermatitis  
atopic, genome-wide multilocus analysis, **295**, 771  
DNFB-induced, dermal mast cell number in, regulation by mast cell chymase, **290**, 1478
- Dermonecrotic factor  
from *Loxosceles laeta* venom, molecular cloning and expression, **298**, 638
- $\Delta$ -5 Desaturase  
delayed induction by peroxisome proliferator, **299**, 832
- $\Delta$ -6 Desaturase  
delayed induction by peroxisome proliferator, **299**, 832  
suppression by highly unsaturated fatty acids, mediation by E-box-like sterol regulatory element, **296**, 111
- Desaturation  
aerobic, and *Euglena* mystery, Konrad Bloch special issue, **292**, 1239
- Desialylation  
role of free radicals, **297**, 502
- Detergent-resistant microdomains, *see* Lipid rafts
- Detoxification  
oxidized LDL by transfer of oxidation product(s) to lecithin:cholesterol acyltransferase, **291**, 758
- Deubiquitinating enzyme subfamily  
identification as substrates of von Hippel–Lindau tumor suppressor, **294**, 700
- Deuteranopia  
missense mutations of red/green opsin genes in, **294**, 205
- Development  
bone, postnatal, effects of pleiotropin targeted overexpression, **298**, 324  
brain-specific splicing of  $\alpha$ -actinin 1 mRNA, **295**, 678  
central nervous system, endogenous promoter driving expression of DSCAM during, **299**, 1  
cerebellum, cortex, and spinal cord, role of mammalian DSCAMs, **293**, 881  
Drb1 expression during, regulation, **297**, 96  
early  
brine shrimp larvae, butyrylcholinesterase involved in, targeting in phthalate ester embryotoxicity, **299**, 659  
SCAN/(Cys)2(His)2 zinc finger transcription factor *ZNF323* in, **296**, 206  
effects of neonatal exposure to endocrine disruptors on testis weight and steroidogenesis in juvenile and pubertal testes, **295**, 193  
embryonic, role of *Drosophila crooked neck* protein, **296**, 288  
EphB6 expression in thymus, studies with knockout mice, **298**, 87  
liver  
perinatal, mannose-6-phosphate receptor expression and binding properties during, analysis (rat), **295**, 1000  
sorting nexin *SNX-L*, expression in liver, analysis (human), **299**, 542  
morphogenetic, *Caenorhabditis elegans*, role of ortholog of human *PHF5a*, **297**, 1049  
nematode, mitochondrial genome content regulation during, **291**, 8  
neuronal, expression of murine BTB/POZ zinc finger gene *Znf131* in, **296**, 319  
pore-forming peptide clonin expression during, **296**, 1238  
primordial and mature tissue, Bmp4 expression during, mechanisms, **293**, 1412  
role of *ZNF359* and *ZFP28* genes (human), **295**, 862  
testicular, role of NYD-SP6 gene, **291**, 101  
zebrafish, gene expression profiling during, and cDNA microarray construction, **296**, 1134  
zinc finger transcription factor MTF-1 expression during, analysis (zebrafish), **291**, 798
- Dexamethasone  
attenuation of TNF- $\alpha$ -induced apoptosis in granulosa cells, role of modulation of Bcl-2, **294**, 51  
effect on adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084  
effect on optineurin gene expression, **298**, 67  
effect on UDP-glucuronosyltransferase activity toward bilirubin in primary rat hepatocyte culture, **291**, 29  
enhancement of LPS-induced neutrophil accumulation in mouse lung, role of CXC chemokines, **294**, 1101  
induction of hepatic mitochondrial ornithine/citrulline transporter mRNA, **294**, 749  
modulation of dendritic cells, **297**, 645  
modulation of hypothalamic hypocretin/orexin mRNA expression, **296**, 129
- DHHC domain  
Golgi-specific GODZ with, isolation and characterization, **296**, 492
- Diabetes  
blood glucose levels in ob/ob and db/db mouse models of, effects of acute and chronic treatment with AICAR, **294**, 798  
cure, regeneration therapy of pancreatic beta cells as approach toward, **296**, 1039  
genome-wide multilocus analysis, **295**, 771  
Goto–Kakizaki rat model, *myo*- and *chiro*-inositol epimerase activities and *chiro*-inositol-to-*myo*-inositol ratios in, **293**, 1092  
implications of high glucose-induced replicative senescence, **296**, 93  
liver of rat with, selective upregulation of system A transporter mRNA, **290**, 903



- platelet protein sialic acid levels in, **297**, 502
- prevention based on counteracting effects of thrifty genes for energy metabolism, **295**, 207
- semicarbazide-sensitive amine oxidase role in methylglyoxal-AGE synthesis, **297**, 863
- streptozocin-induced, Smad pathway activation in kidneys of mice with, **296**, 1356
- type I
- cell surface trafficking of Fas in NIT-1 cells and surface and total Fas expression, **290**, 443
  - circulating lymphocytes from patients, plasma membrane oxidoreductase activity, **290**, 1589
  - NOD mouse model, hsp60 elicitation of abnormal response in macrophages of, **294**, 592
- type II
- erythrocytes from patients with, structural changes and protective effects of *N*-acetylcysteine, **290**, 1393
- GK rat
- pancreatic islets, downregulated expression of exocytotic proteins, **291**, 1038
  - protein-tyrosine phosphatase  $\sigma$  overexpression and impaired glucose-induced insulin release, **291**, 945
  - ob/ob* mouse model, metabolic effects of enzyme-resistant GIP receptor antagonist, **290**, 1420
  - treatment and prevention, dipeptidyl peptidase IV inhibition as approach to, historical perspective, **294**, 1
- Diabetes mellitus
- potential stem/progenitor cell source: ABCG2-expressing side population cells in nestin-positive islet-derived progenitor cells, **293**, 670
- Diabetic retinopathy
- and advanced glycation end products: effects of AGEs on apoptosis and VEGF expression in bovine retinal pericytes, **290**, 973
  - VEGF implicated in, and VEGF receptor, levels in retinal and brain-derived endothelial cells, **293**, 710
- Diacylglycerol
- and cholesterol, synergistic perturbation of phosphatidylcholine/sphingomyelin bilayers, **296**, 806
- Diacylglycerol kinase
- stimulation in *Trypanosoma cruzi* by synthetic peptide carrying residues 1–40 of chicken  $\alpha^D$ -globin, **293**, 314
- Diaphorase
- catalysis of RDX biotransformation via N-denitration mechanism, **296**, 779
- Diazaborine
- Rhodobacter sphaeroides* mutant resistant to, enoyl-acyl carrier protein reductase in, characterization, **299**, 621
- Diazoniumdiolate
- effects on vascular endothelial growth factor gene induction, **296**, 976
- Dibasic residues
- insertion, sorting of constitutive protein to regulated secretory pathway by, **290**, 191
- Dibenz[*a,h*]anthracene
- and plicene, comparative carcinogenicity in rat, **290**, 275
- Dibenzofuran
- catabolism, genes for, dispersion on *Terrabacter* sp. DBF63 genome, **296**, 233
- Di-*n*-butyl phthalate
- embryotoxicity, butyrylcholinesterase targeting in, **299**, 659
- 2,4-Dichlorophenoxyacetic acid
- yeast resistance to, role of Pdr1p-mediated transactivation of *TPO1* and *PDR5* genes, **292**, 530
- Dictyostelium discoideum*
- actomyosin motor domain chimera proteins, design and functional analysis, **299**, 825
  - cytokinesis, role of Rho GDP-dissociation inhibitor, **296**, 305
  - resistance to copper, role of Cu-ATPase, **291**, 476
- Dielectric constant
- ethanol–water solution, effect on structure of DNA–tris(1,10-phenanthroline) cobalt(III) complexes, **299**, 910
- Diels–Alder reaction
- catalysis by native transfer RNA, **294**, 145
- Diet
- cholesterol-rich
    - hyperlipidemia induced by, inhibition of heat shock response in rat heart, **290**, 1535
    - upregulation of Rab7 gene in liver and artery, **293**, 375  - coenzyme Q10 in, anti-atherogenic effects, non-antioxidant mechanism, **296**, 255
  - fasting
    - activation of UCP3 gene expression independent of genes for lipid transport and oxidation in skeletal muscle, **294**, 301
    - male mice, fall of plasma osteocalcin during, prevention by leptin, **295**, 475  - fat in, effect on stearoyl-CoA desaturase, **297**, 1259
  - high-fat and high-carbohydrate, effects on circulating levels of ghrelin (rat), **292**, 1031
  - phosphorus in, role in progression of renal failure, **295**, 917
- Diethylamine NONOate
- specificity of antioxidant enzyme inhibition in skeletal muscle by, **294**, 1093
- Diethyl-dithiocarbamate
- effect on formation of toxic metabolite of acetaminophen, **291**, 1089
- Di(2-ethylhexyl)phthalate
- effect on  $\beta$ -hydroxysteroid dehydrogenase, **293**, 549
- Diferuloylmethane, *see* Curcumin
- Differential display
- expressed genes in pancreatic cancer cells, **293**, 391
  - identification of mRNA expressed during regeneration of pancreas (rat), **299**, 806
  - peroxisome proliferator effect on  $\beta$ -hydroxysteroid dehydrogenase, **293**, 549
- Differential scanning calorimetry
- interfacial enzymatic catalysis: kinetics and thermodynamics, **297**, 446
- Differentiation
- adipocyte, 3T3-L1 cells, proteasomal degradation of p130 during, **290**, 1066
  - Caco-2 cells, effect of vitamin D analog ZK 156718, **290**, 504
  - cardiomyocytes, effects of *CSX/NKX2-5* mutations, **298**, 493
  - chondrocytes, molecular analysis: identification of differentiation markers and growth-related genes (human), **293**, 284
  - in developing pancreas, analysis: potential of immunomagnetic separation using lectin as marker, **293**, 691
  - embryonic stem cells into retinal neurons, **297**, 177
  - epidermal, processing of native caspase-14 at atypical cleavage site in, **296**, 911
  - hepatocytes, maintenance upon immortalization in transgenic mouse, **294**, 864
  - HL-60 cells, role of potentially cytoskeletal Rho-GAP gene ARHGAP10 (human), **294**, 579
  - 4-hydroxynonenal effects in osteosarcoma cells, **293**, 1502
  - immortalized human mesenchymal stem cells, clonal heterogeneity in potential for, **295**, 354
  - keratinocytes, cytoskeletal association of ErbB1 and ErbB2 during, **295**, 1108
  - leukemia M1 cells, regulation by DAP12 ITAM motif, **291**, 296
  - liver epithelial cells into hepatocytes, induction by coculture with hepatic stellate cells, **293**, 1420
  - mammary epithelial cells, role of JAK2, **296**, 139
  - megakaryocytes
    - cell adhesion in, role in sustained MEK1-ERK1/2 pathway activation in membrane skeleton, **297**, 664

- induction by forced expression of EVI1 in UT-7/GM cells, **292**, 609  
 molecular mechanism (mouse), **290**, 865  
 monocytes, role of PPAR $\gamma$ , **290**, 707  
 muscle, Raf/ERK pathway inhibition during, role in cell cycle arrest  
 induction by p38 MAPK activation, **298**, 765  
 myelomonocytic, HL-60 and THP-1 cells, deoxyribonuclease II gene  
 upregulation during, **296**, 48  
 myoblasts, acceleration by androgen receptor, **294**, 408  
 natural killer cells, role of leptin, **298**, 297  
 neural, role of nuclear actin-related protein ArpN $\alpha$ , **299**, 328  
 neurogenic, adipose-derived stromal cells (human, mouse), **294**, 371  
 neuronal, *see* Neuronal differentiation  
 osteoblasts  
 induced by transcription factor decoy against estrogen receptor  $\alpha$   
 gene, **292**, 761  
 interleukin-6 and osteoprotegerin synthesis during, regulation by  
 isoflavones via estrogen receptor-dependent pathway, **295**, 417  
 negative regulation by NF- $\kappa$ B: Saos-2 cell malignant reversion by  
 NF- $\kappa$ B inhibition, **297**, 237  
 p73-dependent *DAN* expression during, **295**, 501  
 stimulation by T-614 in vitro, **299**, 903  
 osteoclasts in vitro, reduction by lactoferrin, **296**, 261  
 platelet-activating factor-induced, in *Herpetomonas muscarum mus-*  
*carum*, correlation with casein kinase 2 activity, **293**, 1358  
 retinoic acid-induced, acute promyelocytic leukemia NB4 cells and  
 HL-60 cells, gene expression in, **296**, 1125  
 sequential cellular de- and redifferentiation in tissue engineering,  
 growth factors for, **294**, 149  
 serum-free, 3T3-L1 preadipocytes, and transient expression of  
 PPAR $\gamma$ , **296**, 125  
 spermatogonia in newt testis organ culture, effects of human  
 recombinant stem cell factor, **294**, 695  
 trophoblast lineage, association with DNA methylation and  
 demethylation, **290**, 701  
 2,2'-Difluorodeoxycytidine  
 cytotoxicity in cells transduced with deoxycytidine kinase gene, **293**,  
 1478  
 Digestive tissue  
*Urb* gene expression in bombesin receptor subtype-3-deficient mice,  
**290**, 1282  
 Digoxin  
 upregulation of MDR1 in human colon carcinoma Caco-2 cells, **292**,  
 190  
 Dihydrofolate reductase  
 encoding by gammaherpesviruses, **297**, 756  
 synthesis and incorporation of [6,7]-selenatryptophan into, **298**, 257  
 Dihydrolipoamide  
 reduction of glutathione, catalysis by glutaredoxins, **295**, 1046  
 Dihydrotestosterone  
 effect on androgen receptor protein turnover, **294**, 779  
 2,6-Dihydroxyacetophenone  
 as antioxidant pharmacophore in flavonoids, **295**, 9  
 L-(3,4-Dihydroxyphenyl)alanine  
 fluorinated analogs, as substrates for Dopa decarboxylase, **295**, 107  
 L-threo-(3,4-Dihydroxyphenyl)serine  
 fluorinated analogs, as substrates for Dopa decarboxylase, **295**, 107  
 1,25-Dihydroxyvitamin D $_3$   
 augmentation of osteoclastogenesis via vitamin D-responsive  
 element of mouse RANKL gene promoter, **290**, 650  
 effect on expression of CSF-1 and receptor in human dendritic cells,  
**297**, 1211  
 effect on transcriptional activity of hGH promoter constructs in  
 MCF-7 breast cancer cells, **292**, 250  
 vitamin D receptor liganded with, induction of CYP3A4 in intestinal  
 and colon cancer cells via DR3 and ER6 vitamin D responsive  
 elements, **299**, 730  
 1 $\alpha$ ,25-Dihydroxyvitamin D $_3$   
 agonists of, modulation of dendritic cells, **297**, 645  
 augmentation of TGF- $\beta$ 1 binding to human osteoblasts, **290**, 1558  
 interaction with thyroid hormones in osteoclast formation, **291**, 987  
 specific binding protein/receptor for, detection in intestinal caveolae  
 membrane fraction, **298**, 414  
 24,25-Dihydroxyvitamin D $_3$   
 effect on expression of CSF-1 and receptor in human dendritic cells,  
**297**, 1211  
 1,25-Dihydroxyvitamin D $_3$  receptor  
 expression and response in bone cells, regulation by estrogens, **299**,  
 446  
 4,4-Diisothiocyanatostilbene-2,2-disulfonic acid  
 antiapoptotic effect in epithelial cells and inhibition of caspase in  
 staurosporine-induced apoptosis, **290**, 1275  
 $\beta$ -Diketone-cleaving enzyme  
 from *Acinetobacter johnsonii*, purification: acetylacetone 2,3-dioxy-  
 genase, **297**, 232  
 Dilated cardiomyopathy  
 role of cardiac ankyrin repeat protein augmentation (human), **293**,  
 1377  
 sarcomeric protein gene mutations in, **298**, 116  
 titin mutations as molecular basis for, **291**, 385  
 Di-leucine sorting motif  
 LGP85/LIMP II, Ile (476) of, role in localization to endocytic  
 organelles, **295**, 149  
 Dilinoleoylphosphatidylcholine  
 effect on LPS-induced TNF- $\alpha$  generation in Kupffer cells of ethanol-  
 fed rats, roles of MAPKs and NF- $\kappa$ B, **294**, 849  
 reduction of acetaldehyde-induced TNF- $\alpha$  generation in Kupffer  
 cells of ethanol-fed rats, **299**, 459  
 role in polyenylphosphatidylcholine protection against ethanol-  
 induced mitochondrial injury (rat), **291**, 1109  
 Dimerization  
 $\beta$ 1-adrenergic receptor, regulation by receptor glycosylation, **297**, 565  
 morphine and orphanin FQ/nociceptin receptors, **297**, 659; *erratum*,  
**298**, 456  
 phospholipase D isozymes, **290**, 375  
 role in phosphorylation and DNA binding of TonEBP/NFAT5, **294**,  
 968  
 v-erbA on inverted repeats, **294**, 35  
 Dimerization domain  
 zinc-fingers and homeoboxes 1, **297**, 368  
 Dimethyl adipimidate  
 and glutaraldehyde, cross-linkage with, for preparation of bovine  
 polyhemoglobin, **293**, 958  
 Dimethylnonanoyl-CoA thioesterase  
 in liver peroxisomes, detection, purification, and molecular cloning  
 (rat), **290**, 629  
 Dioxin, *see* 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin  
 1,2-Dipalmitoyl-*sn*-glycero-3-phosphocholine  
 phospholipase A $_2$ -catalyzed hydrolysis, kinetics and thermody-  
 namics, analysis by differential scanning calorimetry, **297**, 446  
 Dipalmitoyl peptide  
 SH3 domain-binding, effects on intracellular signal transduction and  
 tumor growth in vivo, **296**, 434  
 Dipeptides  
 related dipeptide and characteristic dipeptide of optimal pH in  
 $\alpha$ -amylase, **299**, 647  
 with valine at C-terminus, production by L- $\delta$ -( $\alpha$ -aminoadipoyl)-  
 L-cysteine-D-valine synthetase, **292**, 794  
 Dipeptidyl peptidase IV  
 degradation of glucagon-like peptide-1, effects of metformin, **291**,  
 1302; comment, **296**, 229  
 inhibition  
 by metformin: enhancement of glucagon-like peptide 1 secretion,  
**298**, 779



- for treatment and prevention of type 2 diabetes, historical perspective, **294**, 1; comment, **296**, 229
- Dipole moment  
in relation to single microtubule migration in electric fields, **293**, 602
- DISC, *see* Death-inducing signalling complex
- Disintegrin metalloproteinase  
secreted form of human ADAM9 with  $\alpha$ -secretase activity for amyloid precursor protein, **293**, 800
- Disintegrins  
saxatilin, disulfide bonds in, structural and functional significance, **293**, 530
- Disks Large suppressor protein  
*Drosophila*, mammalian homolog, binding to ribosome receptor, **294**, 1151
- Disulfide bonds  
formation, role in folding and assembly of pestivirus envelope glycoproteins, **296**, 470  
organization in reticulated chimeric peptide derived from maurotoxin and Tsk scorpion toxins, **291**, 640  
role in folding of neprilysin/CD10, **295**, 423  
in saxatilin, structural and functional significance, **293**, 530
- Disulfide reductase-like protein  
involved in keratin degradation, isolation (*Stenotrophomonas* sp.), **294**, 1138; *erratum*, **295**, 1034
- Disulfide transporter  
CdcA, orthologue SoxV, role in thiosulfate oxidation and reduction of SoxW (*Rhodovulum sulfidophilum*), **296**, 737
- Disulfiram  
effect on formation of toxic metabolite of acetaminophen, **291**, 1089
- [<sup>3</sup>H]-1,2-Dithiole-3-thione  
induction of cellular antioxidants in vascular smooth muscle cells, and protective effect against oxidative injury, **292**, 50; *erratum*, **294**, 1192
- Diurnal rhythm  
ghrelin secretion in scheduled meal-fed sheep, relationship to growth hormone secretion, **295**, 255
- Divalent cations  
extracellular, binding symmetry to conduction pore, analysis with tandem dimers of CNG channel, **298**, 478
- Divalent metal transporter 1  
in yeast and mammalian cells, lead and iron uptake by, **295**, 978
- Division plane  
G-actin recruitment to, role of  $\text{Ca}^{2+}$ /calmodulin signal and p85 in *Tetrahymena*, **292**, 1098
- dlk  
effect on cell growth, and interaction with growth-modulating modules in yeast two-hybrid system, **291**, 193
- Dlx5  
and Msx2, binding site for, regulation of *Msx2* expression in apical ectodermal ridge, **290**, 955
- Dmnk  
physical interactions with Orb (*Drosophila melanogaster*), **290**, 225
- DNA  
bending, integration host factor-induced, in promoter regulatory region of *Pseudomonas* TOL plasmid, AFM study, **291**, 361  
binding  
by basic helix–loop–helix domain of E47 transcription factor, role of other protein regions, **290**, 1521  
by CREB, activation by 50-Hz magnetic field in HL60 cells, dependence on  $\text{Ca}^{2+}$ , **296**, 1013  
by MBF-1, **295**, 519  
by Mblk-1 (honeybee), **291**, 23  
by Pax-8, regulation by oxidoreductive modification of two cysteine residues in paired domain by Ref-1, **297**, 288  
by protein disulfide-isomerase ERp57, association with  $\alpha'$  domain, **295**, 67  
sequence recognition by *EcoRI*, role of phosphate contacts, **295**, 198  
specificity, ERF/AP2 domain of *Arabidopsis* DREBs, **290**, 998  
TonEBP/NFAT5 dimerization as requirement for, **294**, 968  
by transcription coactivator CBP, and stimulation of transcription factor DNA binding through small domains, **296**, 118  
v-erbA dimerization on inverted repeats, **294**, 35  
by zinc finger proteins, affinity and specificity of, effect of amino acid number between two ligand cysteines, **296**, 553  
chain unwinding and annealing activities of lipocortin I heterotetramer, regulation by  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$ , **291**, 205  
cleavage, induction by hydroxyl radicals produced by Fenton reaction in osteoclasts, **292**, 94  
closed circular, from hepatitis B virus, quantitation by real-time PCR, **295**, 1102  
collapse: compact form of DNA induced by bacterial DNA-binding protein HU, **290**, 546  
complex with tris(1,10-phenanthroline) cobalt(III), structural transition in ethanol–water solution, **299**, 910  
covalent immobilization on polymer-shielded silver-coated quartz crystal microbalance using photobiotin-based UV irradiation, **290**, 962  
damage, apoptosis induced by, associated cleavage of RNA polymerase II large subunit by caspases, **296**, 954  
delivery into mammalian cells by anthrax toxin, **297**, 1121  
demethylation, association with differentiation of trophoblast lineage, **290**, 701  
DNA–DNA complex formation by mononucleosomes assembled on DNA fragment with (GGA/TCC)<sub>n</sub> repeats, **290**, 16  
double base lesions by benzo[a]pyrene-7,8-dione, **290**, 778  
double-strand breaks  
DNA ligation reactions, differential enhancement by HMGB1 and histone H1, **292**, 268  
end-joining by ataxia-telangiectasia nuclear extract, characteristics, **297**, 275  
double-strand decoy oligomer for NF- $\kappa$ B, inhibition of TNF- $\alpha$ -induced ICAM-1 expression in sinusoidal endothelial cells, **298**, 10  
exogenous, delivered by cationic liposomes, visualization of intracellular trafficking of, **298**, 591  
fragmentation  
in apoptotic lymphocytes (human), **294**, 872  
orderly patterns in necrosis, **294**, 934  
fragments with (GGA/TCC)<sub>n</sub> repeats, mononucleosomes assembled on, formation of DNA–DNA complex, **290**, 16  
genomic, as internal standard for gene expression in staphylococci in vitro and in vivo, **291**, 528  
homologous recombinatorial repair, role of Arg tyrosine kinase, **299**, 697  
human genome and BAC, efficient isolation of regulatory sequences, **290**, 1079  
hypermethylation, silencing of maspin gene in breast cancer, **297**, 125  
intramuscular electrotransfer, interleukin-10 expression after, kinetic studies, **299**, 29  
Klenow *exo*<sup>−</sup> traversal of G–G:C triplex by melting G–G base pairs, **295**, 730  
ligation, differential enhancement by nucleosome linker proteins HMGB1 and histone H1, **292**, 268  
methylation  
association with differentiation of trophoblast lineage, **290**, 701  
hypermethylation, silencing of maspin gene in breast cancer, **297**, 125  
promoter, role in MMP-9 gene expression regulation (mouse lymphoma cells), **297**, 765  
unified model of *FMRI* silencing, **295**, 575  
mitochondrial, *see* Mitochondrial DNA



- osteocalcin promoter, binding by Cbfa1 in osteoblasts, effects of TWIST inactivation, **297**, 641
- oxidatively damaged, preferential binding of mitochondrial transcription factor A (human), **295**, 945
- oxidative strand breaks, potent inhibition by aspirin, **293**, 705
- oxidized and chlorinated bases, loss after treatment with reactive oxygen species, implications for assessment of oxidative damage in vivo, **296**, 883
- phosphorothioate antisense, trisamine-modified, selective binding to mRNA: effect on antisense activity and toxicity, **293**, 1341
- plasmid, *see* Plasmid DNA
- RecA-promoted sliding of base pairs within repeats, quantitative analysis by slippage assay, **296**, 983
- renaturation kinetics, revised theory and experimental verification, **293**, 870
- replication
- coupling to cell growth and cell division, role of Cgta, **292**, 333
  - in *Plasmodium falciparum*: PCNA homologue PfPCNA2 characterization and expression, **298**, 371
- ribosomal
- silkworm, nuclear matrix attachment region function as autonomously replicating sequence in plasmid and chromosomal replication origin in yeast, **299**, 723
  - transcription during oogenesis (*Xenopus laevis*), **290**, 1151
- short tandem repeats, diverse eukaryotic transcripts of, implication of cellular functions, **298**, 581
- single-stranded, isolation from loop-mediated isothermal amplification products, **290**, 1195
- synthesis in human ovarian cancer cells, effect of LH-RH, **294**, 11
- translesion synthesis, defects in absence of REV3, role in p53-independent embryonic death, **293**, 1132
- uniform  $^{13}\text{C}$  and  $^{15}\text{N}$  labeling for NMR studies, **290**, 928
- unwinding by DNA helicase 45, inhibition by DNA-binding agents (pea), **294**, 334
- DnaA
- Escherichia coli*, DNA-binding domain of, secondary structure in solution, **299**, 42
- DNA array
- analysis of gene expression profiles of immature and mature bone marrow-derived dendritic cells using, **290**, 66
- DNA array comparative genomic hybridization
- gene amplification profiling of esophageal squamous cell carcinomas by, **296**, 152
- DNA binding domain
- Escherichia coli* DnaA, secondary structure in solution, **299**, 42
  - NFATc, in vitro selection of RNA aptamer against, **298**, 486
- DNA binding peptide
- P2, proteolipidic vectors based on, for gene transfer to lung, **290**, 1489
- DNA binding protein B
- autoantibody to, as serologic marker in systemic sclerosis, **299**, 549
- DNA-binding proteins
- binding to imperfect inverted repeat in cyanobacterial small heat-shock protein gene, **297**, 616
  - positively charged, induction of apparent cell membrane translocation, **291**, 367
  - pseudorabies virus, functional interaction with PRV DNase, **293**, 1301
- DNA fragmentation factor
- role in fibroblast sensitization to TNF-induced apoptosis, **290**, 796; *erratum*, **291**, 191
- DNA helicase
- activity, of lipocortin I heterotetramer, regulation by  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$ , **291**, 205
  - RecQL* gene-encoded, splicing variant of, molecular cloning (human), **298**, 789
  - Sgs1, complex with topoisomerase III, formation of supercomplex with Mlh1–Mlh3 in meiotic yeast cells, **296**, 949
- DNA helicase 45
- DNA unwinding and ATPase activities, inhibition by DNA-binding agents (pea), **294**, 334
- DNA-inducible kinase
- in *Arbacia punctulata* eggs, induction by prolonged incubation in seawater, **294**, 667
- DNA ligase I
- expression in MiaPaCa human pancreatic cancer cells, effects of cisplatin, **298**, 537
- DNA microarray analysis
- CYP1A1/1A2* induction, **296**, 172
  - DermArray, and bioinformatic approach, biomarkers of human skin cells identified using, **291**, 1052
  - gene expression in *Synechocystis* sp. PCC 6803 in response to salt stress and hyperosmotic stress, **290**, 339
  - genes elicited by ultrasound in U937 cells, **290**, 498
  - identification of genes regulating colorectal carcinogenesis, **296**, 497
- DNA polymerase
- Klenow  $\text{exo}^-$  traversal of G–G:C triplex, mechanism: Klenow  $\text{exo}^+$  block at G–G hairpin, **295**, 730
- DNase, *see* Deoxyribonuclease
- DNA sensors
- sensitivity, enhancement by nanogold surface modification, **295**, 14
- DNA tetraplex
- oligonucleotides forming, mediation of c-myc suppression in Burkitt's lymphoma cells, **290**, 11
- DOC-2/DAB2
- binding to myosin VI, **292**, 300
- DOCK2
- mediation of T cell receptor-induced activation of Rac-2 and IL-2 transcription, **296**, 716
- Docosahexaenoic acid
- in liver, changes after induction of synthetic pathway, **299**, 832
  - suppression of peroxisome proliferator-activated receptor activity in colon tumor cell line HCT 116, **298**, 667
- Dodecylphosphocholine
- micelles, porcine myeloid antibacterial peptide PMAP-23 and analogues in, structural studies, **290**, 204
- Dolichos Biflorus Agglutinin
- as marker for staining and purification of embryonic pancreatic epithelium, **293**, 691
- Domain peptide approach
- analysis of critical regulatory domain of cardiac ryanodine receptor, **291**, 1102
- Domain structure
- pyruvate carboxylase (chicken), **295**, 387
- Domain-swapped dimer
- cyanovirin-N, in solution, two sets of oligosaccharide binding sites in, **298**, 598
- Domain swapping
- domain-swapped structure of mutant cyanovirin-N, **294**, 184
- Dopachrome conversion enzyme
- Aedes aegypti*, functional expression and characterization, **290**, 287
- Dopa decarboxylase
- fluorinated analogs of L-(3,4-dihydroxyphenyl)alanine and L-threo-(3,4-dihydroxyphenyl)serine as substrates for, **295**, 107
- Dopamine
- uptake, and cell surface expression of dopamine transporters, effects of cocaine, **290**, 1545
- Dopamine transporters
- cell surface expression, effect of cocaine, **290**, 1545
- Dorsal/ventral patterning
- in retina, role of TBX3 (*Xenopus laevis*), **290**, 737
- Down syndrome
- brain nucleoside diphosphate kinase activity in, **296**, 970

- elevated apoptosis in pre-mature neurons differentiated from mouse ES cells with single human chromosome 21, **299**, 599
- fetal
- aberrant expression of contractin and capping proteins in brain, **291**, 62
  - reduction of actin-related protein complex 2/3 in brain, **293**, 836
- implications of Ets-2 induction by oxidative stress and cell sensitization to H<sub>2</sub>O<sub>2</sub>-induced apoptosis, **287**, 1003; *erratum*, **291**, 191
- mlec-2a expression in, reduction by extra human chromosome 21, **295**, 112
- Down syndrome cell adhesion molecule
- endogenous promoter driving expression in developing CNS and neural crest, **299**, 1
  - mammalian, role in development of spinal cord, cortex, and cerebellum, **293**, 881
- Doxorubicin
- effects on ryanodine receptor gene expression, **291**, 433
- Doxycycline
- delayed treatment with, effect on anthrax infection (mouse), **297**, 506
- DR5
- mammalian, proposed avian orthologue TVB, expression in hen ovarian follicles, **291**, 226
- Drb1
- cDNA cloning and characterization, **297**, 96
- DRE-binding proteins
- DREB1A and -2A, of *Arabidopsis*, DNA binding specificity of ERF/AP2 domain, **290**, 998
- Drm
- transcriptional activation of p21<sup>Cip1</sup>, mechanism and effect on neoplastic transformation, **295**, 1135
- Drosophila* insulin/relaxin-like peptide gene
- cloning, characterization, and embryonic expression, **295**, 312
- Drosophila* maternal nuclear kinase
- physical interactions with Orb (*Drosophila melanogaster*), **290**, 225
- Drug delivery
- endoplasmic reticulum-targeted, to melanoma cells by pH-sensitive liposomes, **293**, 918
- Drug–DNA complex
- hedamycin:d(ACCGGT)<sub>2</sub>, NMR structural analysis, **290**, 1602
- Drug resistance
- HIV proteases, inhibition by HIV-1 Vif-derived peptide, **292**, 832
- DRY motif
- in  $\alpha$ 2A adrenergic receptor, mutagenesis and peptide analysis, **293**, 1233
  - role in G protein activation of angiotensin II receptor type 1A, **292**, 362
- DSCAM, *see* Down syndrome cell adhesion molecule
- Dsk2
- 26S proteasome subunits binding to, identification, **296**, 813
  - cooperative role with Rpn10 in ubiquitin-dependent proteolysis, **293**, 986
- DSK-R1
- cloning and functional expression: *Drosophila melanogaster* sulfakinin receptor, **291**, 313
- DsRED fusion proteins
- oligomerization, reduction of, **298**, 707
- DTEF-1
- effect on activity of mouse mammary tumor virus LTR, **296**, 1279
- Dual inhibition analysis
- Li<sup>+</sup> and Be<sup>2+</sup> actions on glycogen synthase kinase-3: two magnesium-binding sites, **290**, 967
- Dual-luciferase reporter assay system
- pRL-TK and pHRG-B in, effects of Nurr1, **294**, 1036
- Dual-specificity phosphatases
- low-molecular-weight, identification and characterization, **298**, 545
- Duchenne muscular dystrophy
- dystrophic phenotype effects of micro-dystrophin cDNA introduction as transgene in *mdx* mouse model, **293**, 1265
  - skeletal muscle dystrophin expression with short MCK 1350 promoter/enhancer in *mdx* mouse model, **292**, 626
- DUG
- binding to eIF4A and inhibition of apoptotic pathways, **297**, 78
- dullard
- required for neural development, molecular cloning and characterization (*Xenopus laevis*), **295**, 85
- Dunaliella tertiolecta*
- tolerance of heavy metals and oxidative stress, enhancement by Zn-induced phytochelatin synthesis, **293**, 653
- Dyad symmetry elements
- apo(a) gene 64-bp element with, multiple liver-specific factors binding to, and gene activation, **292**, 243; *erratum*, **294**, 1193
- Dynactin complex
- contractin and capping proteins of, aberrant expression in fetal Down syndrome brain, **291**, 62
- Dynamic light scattering
- analysis of small unilamellar phospholipid vesicles of uniform size, **296**, 1352
- Dynamlin
- distribution in testis, relationship to spermatogenesis, **294**, 261
  - endocytically active, regulation of *Trypanosoma cruzi* invasion of nonphagocytic cells, **291**, 516
- $\alpha$ -Dystroglycan
- deficiency in muscle–eye–brain disease, **291**, 1283; *erratum*, **293**, 1579
- Dystrophin
- expression in skeletal muscles of *mdx* mice with short MCK 1350 promoter/enhancer, **292**, 626
  - micro-dystrophin cDNA, effects on dystrophic phenotypes in transgenic *mdx* mice, **293**, 1265
- E
- E1-like enzyme
- characterization of murine Apg7p as, **292**, 256
- E2F
- pRb/E2F pathway in HL-60 cells, effects of 4-hydroxynonenal, **295**, 267
- E2F1
- transcriptional regulation of p14<sup>ARF</sup>, **291**, 1138
- E2F2
- transcriptional regulation of p14<sup>ARF</sup>, **291**, 1138
- E2F3
- transcriptional regulation of p14<sup>ARF</sup>, **291**, 1138
- E6 oncogene
- human papillomavirus, repression by sodium arsenite, **293**, 298
- E6 proteins
- oncogenic papillomavirus, interaction with fibulin-1, **296**, 962
- E7 oncogene
- human papillomavirus, repression by sodium arsenite, **293**, 298
- E47 transcription factor
- basic helix–loop–helix domain, DNA-binding activity, role of other protein regions, **290**, 1521
- EBAG9
- association with ductal breast cancer progression, **293**, 1544
- E-box-like sterol regulatory element
- mediation of  $\Delta^6$  desaturase suppression by highly unsaturated fatty acids, **296**, 111
- E-box promoter
- phase-gated induction by glutamate in immortalized suprachiasmatic nucleus cell line, **298**, 133
- Ebselen
- dehydroascorbate reductase and thioltransferase-like activities, **291**, 550



- Ecdysis-triggering hormone receptors  
ETH-1 and ETH-2, molecular identification (*Drosophila melanogaster*), **299**, 924
- Ecdysone agonists  
chromafenozide activity as, in Sf9 cells, **292**, 1087
- EcoRI  
sequence recognition by, role of phosphate contacts, **295**, 199
- Ectodomain shedding  
functional boundaries of testis angiotensin I-converting enzyme ectodomain, **297**, 1225  
nectin-1 $\alpha$ , induction by SF/HGF and TPA in MDCK cells, **299**, 472
- Ectopic organizer  
induction by antimorphic PV.1 leading to formation of secondary axis, **292**, 1081
- Edible vaccine  
anthrax, development: expression of protective antigen in transgenic plants, **299**, 345
- Editorials  
serendipitous discoveries from sudden inspirations, **296**, 1037  
systems approach to evolution, **297**, 689  
yeast genome sequence and greed, **297**, 161
- Efflux transporter  
tripartite systems in *Pseudomonas aeruginosa*, substrate specificity, determination by RND component, **299**, 247
- EF-hand motif  
calcium-binding, in visinin-like protein-1, functional analysis, **296**, 827  
cDNA clones containing, from 2Y-3t neuronal cell line established from cerebellum of p53<sup>-/-</sup> mouse, **297**, 473
- EF-hand protein  
Ca<sup>2+</sup>-binding, human calcyphosine 2 gene encoding, cloning, characterization, and expression, **291**, 414
- EGF-like domain  
in membrane-tethered mucin MUC17, **291**, 466
- EGF-like protein  
dlk, effect on cell growth and interaction with growth-modulating modules in yeast two-hybrid system, **291**, 193
- Egfr  
direct binding of *Drosophila* TGF- $\alpha$ -like protein gurken to, **291**, 731
- Egg activation  
DNA-dependent kinase activity induced by prolonged incubation in seawater (*Arbacia punctulata*), **294**, 667
- Eggs  
chicken, expression and secretion of human alkaline phosphatase into, after in vivo gene electroporation in oviduct, **292**, 88  
fucose sulfate polymer, sialoglycan, and speract, induction of sperm acrosome reaction (sea urchin), **296**, 833  
mouse, Ca<sup>2+</sup> oscillations, cytosolic soluble protein factor from flowering plant sperm triggering, **287**, 56; *erratum*, **290**, 613  
NAADP receptor, effects of luminal and cytosolic Ca<sup>2+</sup> (sea urchin), **295**, 806  
sulfated fucan, species-specific induction of sperm acrosome reaction, structural requirements (sea urchin), **298**, 403
- EG-VEGF  
isolation and identification as ligand of orphan G-protein-coupled receptors, **293**, 396
- Eicosanoids  
generation, promotion by group IIE phospholipase A<sub>2</sub>, **292**, 689
- Eicosapentaenoic acid  
modulation of *src*-suppressed C-kinase substrate gene expression, **297**, 1112
- Elafin  
homologous protease inhibitor gene *huWAP2* highly expressed in prostate, identification, **290**, 452
- Elastic fibers  
sun-damaged skin, D- $\beta$ -aspartic acid-containing peptides in, **294**, 1047
- Elastin  
enhanced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635
- Electric field  
migration of single microtubules in, **293**, 602
- Electrolyte leakage  
in discs excised from zucchini and subjected to chilling injury, effects of peptic oligomers, **290**, 577  
in response to chilling injury of zucchini squash, effect of infiltrated polyamines, **295**, 98
- Electromagnetic field  
action on cells, mechanism, **298**, 95  
power frequency fields, suppression of X-ray-induced apoptosis in Ku80-deficient xrs5 cells, **292**, 355
- Electron microscopy, *see also* Immunoelectron microscopy  
actomyosin motor domain chimera proteins, **299**, 825  
3D, *Sulfolobus tokodaii* reverse gyrase, **297**, 749
- Electron paramagnetic resonance  
erythrocyte membrane fluidity: improvement by leptin via NO-dependent mechanism, **297**, 672
- Electron transfer  
multiple-component pathway, condensation in single polypeptide chain by module fusion in cyanobacterial A-type flavoprotein, **294**, 82
- Electron transport  
mitochondrial, lack of role in acute O<sub>2</sub> sensing in model airway chemoreceptors, **291**, 332
- Electron transport chain inhibitors  
effects on microcystin-induced onset of mitochondrial permeability transition and apoptosis in rat hepatocytes, **291**, 321
- Electroporation  
combined with plasmid vector with SV40 enhancer elements, effect on gene expression in mouse muscle, **298**, 505  
gene, in hen oviduct in vivo, expression and secretion of human alkaline phosphatase gene into chicken egg after, **292**, 88  
genetic transduction into synovium in vivo, **293**, 1530
- Electrospray ionization mass spectrometry  
carnosine quenching of 4-hydroxy-nonenal, **298**, 699  
cysteine-rich calcium-binding S100A3 protein from human hair cuticle, **299**, 857  
Hb Zurich-Hottingen variant detection, **292**, 1044  
4-hydroxynonenal concentration in nucleus, **293**, 1502
- Electrostatic force  
role in DNA condensation, **299**, 910
- Electrotransfer  
genes into skeletal muscle, description and physiological applicability of pulse generator, **296**, 443  
intramuscular, DNA, interleukin-10 expression after, kinetic studies, **299**, 29
- Elicitors  
downregulation of phosphatidylcholine-hydrolyzing phospholipase C and upregulation of phospholipase A in plant cells by, **293**, 766
- Ellipticine  
inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334
- Elongation factor 1  
subunits, interactions with aminoacyl-tRNA synthetases, **291**, 158
- Elongation factor 2 kinase  
antibodies to, detection in systemic lupus erythematosus patients, **293**, 1073
- Elongation factor Tu  
specificity for hydrophobic peptides, **296**, 749
- EMAP  
identification as  $\delta$ -glutamate receptor binding protein, **291**, 85
- Embryo  
cell adhesion, regulation by rac (*Xenopus laevis*), **298**, 364  
cell cycle progression in, role of APC regulator CDH1 (*Xenopus*), **294**, 120



- chorioallantoic membrane, angiogenesis in, stimulation by poly-L-lysine/heparin (chicken), **290**, 820
- development
- expression of zebrafish zinc finger transcription factor MTF-1 during, **291**, 798
  - role of *Drosophila crooked neck* protein, **296**, 288
  - role of *ZNF359* and *ZFP28* genes (human), **295**, 862
- Drosophila* insulin/relaxin-like peptide gene expression, **295**, 312
- early developing, effect on gene expression patterns in oviduct (mouse), **292**, 564
- Fly-like putative transporters homologous to *Drosophila Orct* and mammalian OCTNs (human), **297**, 1159
- germinated wheat, poly(A) polymerases PAPI and PAPII detection and regulation by 65-kDa protein kinase, **293**, 403
- neurula, of Chinese amphioxus, expressed sequence tag analysis of mRNAs expressed in, **299**, 74
- p53-independent death, induction by absence of REV3, **293**, 1132
- parthenogenetic and androgenetic, imprinted genes differentially expressed in, cDNA microarray screening, **290**, 1499
- preimplantation
- Oct-3/4* and *c-mos* genes in, inactivation using short interfering RNAs (mouse), **296**, 1372
  - survival after heat shock, apoptosis as adaptive response facilitating (bovine), **295**, 37
- segmentation, expression of *polyhomeotic* homologs *ph2α* and *ph2β* in distinct regions of somites during (zebrafish), **291**, 245
- Xbr-1a/Xvent-2 homeobox gene, transcriptional regulation: promoter region analysis, **298**, 815
- Embryogenesis
- early, SCAN/(Cys)2(His)2 zinc finger transcription factor *ZNF323* expression (human), **296**, 206
  - homeodomain-interacting protein kinase 2 gene expression (mouse), **290**, 942
  - interaction of *Caenorhabditis elegans* reticulon with RME-1 during, **293**, 698
  - regulated localization of Orb by Dmnk in, implications of physical interactions of Orb and Dmnk, **290**, 225
- Embryonic carcinoma cells
- neuronal differentiation and gliogenesis, effects of Wnt-1 (P19 cells), **293**, 167
- Embryonic stem cells
- differentiation into retinal neurons, **297**, 177
  - with single human chromosome 21, pre-mature neurons differentiated from, elevated apoptosis (mouse), **299**, 599
- Embryotoxicity
- phthalate esters, butyrylcholinesterase targeting in, **299**, 659
- EM-X
- effect on oxidant-induced IL-8 release and phospholipid peroxidation in vitro, **296**, 1148
- Emx1
- mutant mouse with C57BL/6 background, normal corpus callosum, **276**, 649; *erratum*, **296**, 1033
- Encephalomyocarditis virus
- internal ribosomal entry site-dependent translation, enhancement by continuous heat stress, **297**, 224
- End-joining
- DNA double-strand breaks by ataxia-telangiectasia nuclear extract, characteristics, **297**, 275
- Endochondral ossification
- heterotopic, inhibitory effect of basic fibroblast growth factor, **293**, 680
- Endocrine cells
- sorting of exocrine secretory protein to regulated secretory pathway in GH4C1 and PC12 cells, **299**, 98
- Endocrine disruptors
- neonatal exposure, effects on testis weight and steroidogenesis in juvenile and pubertal testes, **295**, 193
- Endocytosis
- in bone-resorbing osteoclasts, analysis by cloning and subcellular localization of Rab proteins, **293**, 1060
  - gelonin in rat liver, **296**, 1180
  - GTPases active in, regulation of *Trypanosoma cruzi* invasion of nonphagocytic cells, **291**, 516
  - hyaluronan receptor for, identification as HARE and not CD44 or CD54, **294**, 918
  - oxidized LDL by adipocytes, role of CD36, **295**, 319
  - receptor-mediated, and plasmid DNA uptake and degradation by murine dendritic cells, **299**, 389
  - reticulon nRTN-C function during embryogenesis in, **293**, 698
- Endoderm
- foregut and midgut, organ development from, role of OC-3, **292**, 848
- Endogenous proteins
- cellular fate, use of chimeric proteins for study of, **290**, 332
- Endoglucanase
- major, from *Thermoascus aurantiacus*, atomic resolution structure, **296**, 161
- Endoglycosidase-H
- MR1 protein sensitivity to, **290**, 722
- Endometrial cancer
- estrogen receptor  $\alpha$  gene polymorphisms in, **297**, 558
- Endometrial epithelium
- epitopes on, analysis by scanning immunoelectron microscopy, **292**, 102
- Endomorphin
- analogue with 1-aminocyclohexane-1-carboxylic acid for proline, structural similarity to Leu-enkephalin  $\beta$ -turn, **297**, 138
- Endomorphin 2
- binding properties and biological activity, effects of side chain modifications, **290**, 153
- Endonuclease-sensitive repeat amplification
- large-scale synthesis of  $^{13}\text{C}$ - and  $^{15}\text{N}$ -labeled DNA for NMR studies, **290**, 928
- Endoplasmic reticulum
- cholesterol, effect of protein kinase C, **290**, 488
  - drugs targeted to, delivery to melanoma cells by pH-sensitive liposomes, **293**, 918
  - functional, Pmr1-GFP-expressing COS-1 cells with,  $\text{Ca}^{2+}$  signals in, **294**, 249
  - membrane topogenesis of three amino-terminal transmembrane segments of glucose-6-phosphatase on, **292**, 153
  - OASIS localization to, **293**, 470
  - and plasma membrane, formation of junctional complex between, role of junctophilin type 3 (mouse), **292**, 318
  - proprotein convertase PACE4A secretion and retention, role of C-terminal region, **290**, 878
  - type I membrane protein localization to, effect of Lys3 and Lys5 substitution by His or Arg, **291**, 751
  - vacuole membrane protein 1 localization (rat), **290**, 641
  - vesicle budding from, relationship to unfolded protein response, **296**, 560
  - vesicle formation from, genetic link to unfolded protein response, **296**, 568
- Endoplasmic reticulum stress
- apoptosis mediated by, and caspase-12, **293**, 722
  - translation regulation under, interference by familial Alzheimer's disease-linked presenilin-1 mutants, **296**, 313
- $\beta$ -Endorphin
- related peptide SLTCLVKGFY, identification as selective non-opioid  $\beta$ -endorphin receptor agonist, **292**, 799
- $\beta$ -Endorphin receptor
- nonopioid,  $\beta$ -endorphin-like peptide SLTCLVKGFY identification as selective agonist of, **292**, 799

## Endosomes

- early, LGP85/LIMP II distribution to, role of Ile (476) of di-leucine sorting motif, **295**, 149
- late, transmembrane protein 9 localization and characterization (human), **297**, 912

## Endothelial cells

- adhesion to extracellular matrix, role in Ets-1 upregulation of MMP-1, **291**, 130
- anchoring onto fibrin clot, effect of vitronectin–fibrin interaction, **290**, 682
- anti-angiogenic effects of homocysteine in vitro, **293**, 497
- antioxidant activity of pentaerythrityl trinitrate, role of heme oxygenase-1 induction (ECV304 cells), **290**, 1539
- aortic, expressing mutant PDGF receptors, functional analysis with respect to MMP-3 expression, **294**, 231
- brain, hypocrellin-A and -B photodynamic therapy, effects on release of angiogenesis regulators (SVHCEC cells), **298**, 520
- brain-specific CYP4X1 expression (rat), **296**, 677
- cell cycle progression
  - effect of heme oxygenase-1, comparison with smooth muscle cells, **296**, 1077
  - role of heme oxygenase-1 gene, **291**, 68
- coronary, in vitro transfer of antisense oligodeoxynucleotides by ultrasound into, **298**, 587
- cytotoxicity of interferon- $\gamma$  and TNF- $\alpha$  for, role of nitric oxide, **291**, 780
- with different phenotypes, opposite effects of pigment epithelium-derived factor in, **294**, 764
- endotoxin-induced NF- $\kappa$ B activation and apoptosis in, role of TIRAP, **295**, 157
- glomerular, expression of type IV collagen isoforms (rat), **295**, 401
- G proteins, strain and strain rate activation (human), **299**, 258
- histamine-stimulated, Ca<sup>2+</sup> oscillation frequency and NF- $\kappa$ B activity in, regulation by phospholipase D (human), **292**, 325
- human umbilical vein, *see* Human umbilical vein endothelial cells
- hydraulic conductivity in monolayers and nitric oxide levels, effects of oscillatory shear, **293**, 1466
- hyperpermeability leading to accumulation of ascites fluid, induction by tumor autocrine motility factor, **293**, 192
- hypoxia-inducible factor-1 activity, modulation by quercetin, **293**, 446
- interleukin-4-activated Stat6 activity and VCAM-1 expression, phytochemical inhibition, **292**, 841
- megakaryocyte adhesion to, role of NJ-1 surface antigen, **292**, 667
- migration
  - inhibition by PPAR activators via targeting of Akt, **293**, 1431
  - sphingosine 1-phosphate-induced, enhancement by EDG-5 antagonist, **299**, 483
- monocyte adhesion, effects of oral vitamin C (human), **294**, 1161
- myosin light chain kinase, interaction with cortactin, **298**, 511
- NF- $\kappa$ B-mediated induction of adhesion molecules by TNF- $\alpha$ , regulation by atrial natriuretic peptide, **295**, 1068
- nuclear function of angiogenin in, relationship to rRNA production, **294**, 287
- PDGF-A and -B chain expression, inhibition by 15-deoxyprostaglandin J<sub>2</sub> independent of PPAR $\gamma$ , **298**, 128
- proinflammatory cytokine-induced chemokine production, prevention by APC0576 (human), **293**, 945
- proinflammatory effect of TWEAK/Fn14 interaction (HUVEC), **299**, 488
- retinal and brain-derived, vascular endothelial growth factor and VEGF receptor levels, **293**, 710
- selectins on, capture of neutrophils after exposure to cigarette smoke, **295**, 1150
- shear-activation of PI 3-kinase and JNK in, role of Cbl, **292**, 892
- sinusoidal
  - fibronectin promoter occupation and function, **295**, 1077

HARE identification as endocytic hyaluronan receptor, **294**, 918

TNF- $\alpha$ -induced ICAM-1 expression, inhibition by double-stranded decoy DNA oligomer for NF- $\kappa$ B, **298**, 10

skeletal muscle, VEGF expression during prazosin-induced angiogenesis in NOS-knockout mice, **297**, 1270

tyrosylprotein sulfotransferase isoform shift in, mediation by shear stress, **294**, 541; *erratum*, **295**, 1033

## Endothelial-derived gene-1

identification, **290**, 602

## Endothelial differentiation gene-5

antagonist, enhancement of sphingosine 1-phosphate-induced migration of vascular endothelial and smooth muscle cells, **299**, 483

## Endothelial-like cells

ECV304, gene IC53 stimulating proliferation of, upregulation in failing heart, **294**, 161

## Endothelial progenitor cells

bone marrow-derived, role in angiogenesis and tumor growth (mouse), **297**, 1058

## Endothelin-1

increased expression in mammary gland of lactating mice, **297**, 1339

inhibition of resistin secretion in 3T3-L1 adipocytes, **296**, 383

stimulation of  $\alpha$ 1 $\beta$ 1 integrin-mediated collagen matrix remodeling by mesangial cells (rat), **299**, 555

## Endothelin-2

increased expression in mammary gland of lactating mice, **297**, 1339

## Endothelin-converting enzyme-1

upregulation in failing myocardium, prevention by angiotensin-converting enzyme inhibitor therapy (human), **295**, 1057

## Endothelin-converting enzyme-2

isoforms ECE-2a-1, ECE-2a-2, ECE-2b-1, and ECE-2b-2, isolation and characterization, **293**, 421

## Endothelin receptor B

antisense oligodeoxynucleotides, in vitro transfer into coronary endothelial cells by ultrasound, **298**, 587

and mGluR, chimeras, clustering by Homer/vesl, **295**, 756

## Endothelium

pulmonary vascular, adrenomedullin receptor as clearance receptor in, **294**, 315

thrombin-stimulated Pyk phosphorylation, role of intracellular Ca<sup>2+</sup>, PKC, and Src kinases (human), **294**, 1001

## Endothelium-derived hyperpolarizing factor

hydrogen peroxide identification in human mesenteric arteries as, **290**, 909

mediation of arterial relaxation by leukemia inhibitory factor, **294**, 359

## Endotoxemia

hemodynamic effects of exogenous adrenomedullin in healthy and affected sheep, **296**, 134

Endotoxin, *see* Lipopolysaccharide

## Energy balance alterations

pathological conditions involving, role of uncoupling proteins in, review, **293**, 1145

## Energy metabolism

thrifty genes for, single nucleotide polymorphisms, evolutionary origins, and intervention in obesity-related diseases, **295**, 207

## Enhancer elements

SV40, plasmid vector with, and electroporation, effects on gene expression in mouse muscle, **298**, 505

## Enhancer of Polycomb 1

interaction of RFP with, role of RFP O-glycosylation, **290**, 409

## Enigma protein

differential interaction with RET isoforms, **296**, 515

## Enoyl-acyl carrier protein reductase

in diazaborine-resistant *Rhodobacter sphaeroides* mutant, characterization, **299**, 621



- Enoyl-CoA hydratase  
direct hydration of 3-octynoyl-CoA, missing link in Konrad Bloch's enzymatic studies with 3-alkynoyl thioesters, **292**, 1171
- Enterobacter aerogenes*  
antibiotic-resistant strains, inhibitors of antibiotic efflux pump in, **293**, 1370
- Enterococcus faecium*  
vancomycin-resistant, synergistic effect of vancomycin and  $\alpha$ -helical antimicrobial peptide P18 against, **290**, 558
- Enterocytes  
susceptibility to Fas-induced apoptosis, regulation on level of cIAP1 and 2, **290**, 1308
- Envelope membrane  
chloroplast, protoporphyrin IX detection (pea), **299**, 751
- Environmental stresses  
multiple, MAP kinase gene *OsMSRMK2* responsive to, isolation (*Oryza sativa*), **294**, 1009
- Enzyme assays  
in 96-well arrays, in measurement of  $\beta$ -galactosidase activity in bacteria, **290**, 397; *erratum*, **292**, 292
- Eosinophils  
from atopic dermatitis patients, *ETEA* gene highly expressed in, cloning and characterization, **297**, 1282  
specific granules, lysosomal characteristics (human), **291**, 844
- Eotaxin  
induction of migration of RBL-2H3 mast cells via Rac-ERK-dependent pathway, **298**, 392
- EphA2 receptor  
negative regulation by Cbl, **296**, 214
- EphB4 receptor  
role in erythropoiesis, **293**, 1124
- EphB6  
developmental expression in thymus, studies with knockout mice, **298**, 87
- Ephrin-A2  
structural analysis by function-blocking and non-blocking monoclonal antibodies, **295**, 348
- Ephrin-B2  
role in erythropoiesis, **293**, 1124
- (-)-Epicatechin  
green tea, elevation of P-glycoprotein function, **297**, 412
- Epidermal cells  
TNF- $\alpha$ -induced apoptosis, molecular mechanism (JB6-derived RT-101 cells), **295**, 24
- Epidermal growth factor  
activation of Ras-like small GTP-binding protein Rin, **295**, 651  
EGF/ERK2 nuclear signaling, attenuation by Naf1, **297**, 17  
gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482  
induction of calcium-dependent oxidation of thioredoxin, **290**, 624  
related motifs, identification in fat3, **290**, 1260  
stimulation of hepatocyte growth, role of MAP kinases, **291**, 588  
transgenic mice expressing IgEGF, immortal hepatocytes derived from, **294**, 864
- Epidermal growth factor-family ligands  
betacellulin, solution structure, **294**, 1040
- Epidermal growth factor receptor  
gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482  
*Helicobacter pylori*-stimulated transactivation, role of metalloprotease cleavage of HB-EGF, **295**, 695  
homolog Egfr in *Drosophila*, direct binding of TGF- $\alpha$ -like protein gurken to, **291**, 731  
human uterine RL95-2 cell, effects of benzo[a]pyrene and TCDD, **294**, 101  
inhibition by *N*-coumaroyltyramine: arrest of human transformed cells, **292**, 1104  
inhibitors of, regulation of Akt, implications for mechanism of EGF-R inhibitor-enhanced TRAIL-induced apoptosis, **295**, 515  
integral role in hepatocyte growth factor-mediated hepatocyte proliferation, **290**, 197  
kinase domain, tyrosine phosphorylation of maspin in normal mammary epithelia and breast cancer cells, **295**, 800  
transactivation, inhibition, role in blocking of AngII-induced migration by metalloproteinase inhibitor, **294**, 1023  
tyrosine kinase inhibitor specific for, inhibition of TGF- $\alpha$ -driven tumor growth, **290**, 349
- Epidermal growth factor receptor tyrosine kinase  
solubilized, activation mechanism, **290**, 914
- Epidermis  
p27<sup>BBP</sup>/eIF6 association with intermediate filaments/nuclear matrix cytoskeleton, **295**, 295  
phospholipase B expression (human), **295**, 362
- Epididymis  
erythropoietin production (mouse), **296**, 145
- (-)-Epigallocatechin gallate  
effects on phospholipase D activity and degranulation in stimulated neutrophils, **292**, 951  
protective effect on AMPA-induced toxicity in hippocampal neurons, **290**, 1506
- Epigallocatechin-3-gallate  
inhibition of  $\beta$ -catenin/Tcf activity, relationship to H<sub>2</sub>O<sub>2</sub> generation, **296**, 584
- (-)-Epigallocatechin-3-gallate  
osteoclast cell death induction by, mechanism, role of Fenton reaction, **292**, 94
- Epilepsy  
associated sodium channel  $\beta$ 1-subunit mutation, modulation of Na<sup>+</sup> current in HEK cells, **291**, 1095  
severe myoclonic, in infancy, correlation with SCN1A mutations, **295**, 17
- Epithelia  
calcium channels, rapid inactivation caused by single amino acid mutation (human, rodent), **291**, 278
- Epithelial cells  
tight junctions, PAR3 $\beta$  localization to, **299**, 641  
tumor-derived and normal, conservation of MUC1 metabolic complex formation in, **293**, 1183  
*Vibrio cholerae* adherence to, role of in vivo induced *icmF* gene, **295**, 922
- Epithelial-mesenchymal interactions  
role of TGF- $\beta$ 1 and HGF, **297**, 255
- Epithelium  
hair follicle components derived from, Bmp4 expression in, promoter control modules directing, **293**, 1412  
pulmonary, glucocorticoid signaling in, role of C/EBP transcription factors, **293**, 907
- Epitopes  
analysis on endometrial epithelium by scanning immunoelectron microscopy, **292**, 102  
distinct, on CD73 from mesenchymal stem cells, recognition by SH-3 and SH-4 antibodies (human), **289**, 519; *erratum*, **290**, 1609  
equivalent, of p53 homologues and p53 antibodies, theoretical comparison, **293**, 850  
human B and T cell epitopes of bovine serum albumin, **293**, 1348  
IgE and IgG, identification and fine mapping in ovomucoid, **292**, 1070  
K<sup>b</sup>-restricted CTL, pH-sensitive liposomes encapsulated with, in vivo antigen delivery route and immune boosting effects, **292**, 682  
thyroperoxidase B-cell autoepitopes, constitution and clustering in folded immunodominant region, **295**, 1118



## Epitrochlearis muscle

PGC-1 mRNA expression, effects of low-intensity prolonged exercise (rat), **296**, 350

## EPM2A

alternative splicing, modulation of subcellular localization of laforin, **291**, 1134

## Epstein–Barr virus

BHRF1, inhibition of TRAIL-induced apoptosis in BJAB cells, **297**, 682

genetic transduction by electroporation into synovium in vitro, **293**, 1530

latent membrane protein 1, potent phosphorylation by protein kinase CK2, **294**, 586

polyethylenimine/EBV-based plasmid vector, suicide gene transfer with, therapeutic effect on hepatocellular carcinoma, **291**, 48

## Equilibrium analysis

hemoglobin, by multiangle laser light-scattering method, **290**, 1382

## ErbB1

and ErbB2, cytoskeletal association during keratinocyte differentiation, **295**, 1108

## ErbB2

and ErbB1, cytoskeletal association during keratinocyte differentiation, **295**, 1108

## Erectile function

enhancement in rat by adeno-associated virus-mediated gene transfer of dominant negative RhoA, **298**, 427

## ERF/AP2 domain

in *Arabidopsis* DREBs, DNA binding specificity, **290**, 998

## ERp57

DNA-binding activity, association with  $\alpha'$  domain, **295**, 67

## Erythrocyte ghosts

thioredoxin reductase reduction of lipid hydroperoxides and sparing of  $\alpha$ -tocopherol in, **292**, 45

## Erythrocytes

fish, lysis by *Vibrio mimicus* phospholipase A, **298**, 269

high-density, osmotic resistance in transglutaminase 2-deficient mice, **291**, 1123

histone crosslinking by transglutaminase, **293**, 1453

intracellular calcium, increase by arachidonic acid, **293**, 974

membrane fluidity, improvement by leptin via NO-dependent mechanism, EPR study (human), **297**, 672

pentose phosphate pathway, O<sub>2</sub>-dependent stimulation by *S*-nitrosocysteine (human), **294**, 829

structural changes in non-insulin-dependent diabetes and protective effects of *N*-acetylcysteine, **290**, 1393

## Erythrokeratoderma variabilis

connexin31 mutation causing, lethal effect of expression in HeLa cells, **296**, 721

## Erythroleukemia cells

aquaporin-1 gene induction by retinoic acid (HEL cells), **293**, 913

proliferation, reduction by SHIP2 overexpression (K562 cells), **296**, 106

## Erythropoiesis

regulatory role of retinoic acids, **293**, 913

role of EphB4 receptor and ephrin-B2, **293**, 1124

## Erythropoietin

production in epididymis (mouse), **296**, 145

## Erythropoietin receptor

soluble, stabilization of variable domain in presence of, selection of human antibody fragments using, **295**, 31

*Escherichia coli*

cell viability, decrease in RMF,  $\sigma^{38}$ , and OmpC triple mutant, **299**, 252

cyclic nucleotide phosphodiesterase homolog/RNA ligase, characterization, **291**, 875

cytochrome *b*<sub>03</sub> from, nitric oxide binding to and turnover by, **296**, 1272

DnaA DNA-binding domain, secondary structure in solution, **299**, 42

folding of human liver mitochondrial aldehyde dehydrogenase in, mediation by GroESL, **298**, 216

$\beta$ -galactosidase activity measurement in 96-well arrays, **290**, 397; erratum, **292**, 292

heme-regulated phosphodiesterase, binding of cyanide, effect of Met95 mutations, **299**, 169

Hsc62–Hsc56–GrpE as Hsp70 chaperone system, **293**, 1389

L-lactate and glycolate permeases, transport of L-lactate, D-lactate, and glycolate, **290**, 824

OmpA function, **292**, 396

penicillin amidase targeting to Tat translocation machinery by unusual signal peptide, **291**, 146

penicillin-binding protein 5, C-terminal membrane anchoring, **290**, 427

periplasmic copper handling in, role of Pco proteins, **295**, 616

protein folding in vivo, effects of silent mutations, **293**, 537

recombinant plasmid selection by Lac<sup>+</sup>/Lac<sup>−</sup> colony phenotype detection, limitations of, **298**, 37

ribosome-associated cold shock response protein Yfia, solution structure, **299**, 710

*rnpB* promoter, stringent response of, alteration by mutations in −35 region, **290**, 1183; erratum, **291**, 431

sialic acid synthase, structural characterization, **295**, 167

transcriptional activation by SoxS in, pre-recruitment as mechanism of, **291**, 979; erratum, **294**, 1191

UMP kinase, comparative modeling and immunochemical reactivity, **294**, 173

ZntR from, directed amino-acid alterations in, functional analysis, **299**, 438

*Escherichia coli*, heterologous expression

active ferritin H/L-hybrid from human, sequence effect on folding efficiency, **298**, 225

C-reactive protein binding phosphorylcholine, from human, secretory production, **295**, 163

heparan sulfate 3-O-sulfotransferase-1 from human, **290**, 1206

inhibitor of apoptosis protein from *Trichoplusia ni*, **293**, 675

interferon  $\alpha$ 2 and  $\alpha$ 8 from human and HCV core protein, effect of use of tRNA<sub>AGA/AGG</sub>, **296**, 1303

methionine sulfoxide reductase B from mouse, effect of selenocysteine, **297**, 956

## Esophageal squamous cell carcinomas

gene amplification profiling by DNA array CGH, **296**, 152

*Espn<sup>ie</sup>*

genetic and physical maps on mouse chromosome 4, **296**, 1143

## Esterification

propionate groups, promotion of  $\alpha/\beta$  hemoglobin chain homogeneity of CN–hemin binding, **293**, 1354

## Estradiol

identification of nuclear type II [<sup>3</sup>H]estradiol binding sites as histone H4, **296**, 1083

17 $\beta$ -Estradiol

modulation of angiotensin II-induced protein kinase C activity in anterior pituitary, gender differences (rat), **294**, 95

stimulation of Wilms' tumor 1 protein expression, **295**, 784

Estradiol- $\beta$ -glucuronide

transport by ABCA8, **298**, 41

## Estrogen

activation of cyclin-dependent kinases 4 and 6 via cyclin D induction in primary osteoblasts (rat), **299**, 222

effect on MAPK activation, mediation by membrane association of estrogen receptor  $\alpha$ , **294**, 926

pituitary tumors induced by, tyrosine kinases in, effects of angiotensin II and IV (rat), **297**, 931

regulation of *c-fos* gene expression via PI-3-kinase-dependent activation of serum response factor in MCF-7 breast cancer cells, **294**, 384

- regulation of 1,25-dihydroxyvitamin D<sub>3</sub> receptor expression and response in bone cells, **299**, 446
- regulation of tissue-specific calpain in anterior pituitary, **295**, 261
- xenoestrogen screening in MCF-7 cells using WISP-2 as marker, **294**, 602
- Estrogenicity**
- environmentally relevant compounds, screening in MCF-7 cells using WISP-2 as marker, **294**, 602
- Estrogen receptor**
- role in isoflavone regulation of interleukin-6 and osteoprotegerin synthesis during osteoblast differentiation, **295**, 417
- Estrogen receptor  $\alpha$**
- agonist/antagonist activities of terpenoids derived from Umbellifer-ae, **291**, 354
  - gene, transcription factor decoy against, osteoblastic differentiation induced by, **292**, 761
  - gene polymorphisms in endometrial cancer, **297**, 558
  - membrane association, mediation of estrogen effect on MAPK activation, **294**, 926
  - single nucleotide polymorphisms in human renal cell carcinoma, **296**, 1200
- Estrogen receptor  $\beta$**
- agonist/antagonist activities of terpenoids derived from Umbellifer-ae, **291**, 354
- Estrogen receptor-related receptor  $\gamma$**
- coactivation by PERC and PGC-1, **299**, 872
- Estrogen response element**
- role in estrogen upregulation of tissue-specific calpain in anterior pituitary, **295**, 261
- Estrone sulfatase**
- derivatives of biphenyl sulfamate-based compounds as inhibitors of, design, synthesis, and evaluation, **294**, 180
- ETEA**
- highly expressed, from blood cells of atopic dermatitis patients, cloning and characterization, **297**, 1282
- ETF**
- effect on mouse mammary tumor virus LTR activity, **296**, 1279
- Ethanol**
- Kupffer cells of rats fed with, acetaldehyde-induced TNF- $\alpha$  generation in, reduction by dilinoleoylphosphatidylcholine, **299**, 459
  - mitochondrial injury, protection by polyenylphosphatidylcholine, role of dilinoleoylphosphatidylcholine (rat), **291**, 1109
- Ethidium bromide**
- inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334
- Ethionine**
- ATP depletion mediated by, in rat liver, hypophosphorylation of translation initiation regulators during, **298**, 235
- Ethnic differences**
- CYP2A6*\*7, \*8, and \*10 allelic frequencies among Japanese, Chinese, and Caucasians, **290**, 318
- Ethylene**
- production in discs excised from zucchini and subjected to chilling injury, effects of peptic oligomers, **290**, 577
  - production in response to chilling injury of zucchini squash, effect of infiltrated polyamines, **295**, 98
- 3-[(+/-)-(E)-Ethyl-2'-(E)-hydroxyimino]-5-nitro-3-hexenecarbamoyl]-pyridine
- effects on vascular endothelial growth factor gene induction, **296**, 976
- N-Ethylmaleimide-sensitive factor**
- expression level in pancreatic islets of diabetic GK rat, **291**, 1038
- Etomoxir**
- inhibition of carnitine palmitoyltransferase-1 in breast cancer cells, **285**, 217; *erratum*, **295**, 570
- Etoposide**
- homologous recombination induced by, effects of cyclin E over-expression in Chinese hamster cells, **296**, 363
- inhibition of gastric cancer cell growth, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480
- Ets-1**
- upregulation of MMP-1 expression in vascular endothelial cells via cell adhesion to ECM, **291**, 130
- Ets-2**
- induction by oxidative stress, and sensitization of cells to H<sub>2</sub>O<sub>2</sub>-induced apoptosis, implications for Down's syndrome, **287**, 1003; *erratum*, **291**, 191
- ETS recognition sites**
- loss of accessibility in MMP regulatory elements, role in lack of MMP-1 and MMP-3 expression in Ewing sarcoma, **293**, 61; *erratum*, **295**, 573
- ETS transcription factors**
- interaction with  $\mu$  enhancer DNA, block by dominant-negative HMGAI, **292**, 427
- Euglena gracilis*
- pentachlorophenol-induced CYP-450, constitutive expression of immunoidentical forms, **298**, 277
- Euglena* mystery
- and aerobic desaturation, Konrad Bloch special issue, **292**, 1239
- Eukaryotic initiation factor 2 $\alpha$**
- phosphorylation, attenuation by familial Alzheimer's disease-linked presenilin-1 mutants, **296**, 313
- Eukaryotic initiation factor 4**
- phosphorylation, increase by IGF-1 treatment, **291**, 560
- Eukaryotic initiation factor 4A**
- binding to DUG, **297**, 78
- Eukaryotic initiation factor 4AII**
- human, association with hepatitis C virus NS5B protein in vitro, **292**, 659
- Eukaryotic initiation factor 4E**
- hypophosphorylation during ethionine-mediated ATP depletion, **298**, 235
- Eukaryotic initiation factor 4E-binding protein 1**
- hypophosphorylation during ethionine-mediated ATP depletion, **298**, 235
- Eukaryotic initiation factor 4G**
- homologue DUG, binding to eIF4A and inhibition of apoptotic pathways, **297**, 78
  - molecular interactions with PDCD4 in senescent diploid fibroblasts (human), **293**, 617
- Eukaryotic initiation factor 6**
- role in nuclear matrix filament formation, **295**, 295
- EVII**
- gene expression, role in abnormal megakaryocytic differentiation in 3q21q26 syndrome, **292**, 609
- Evoked excitatory postsynaptic current**
- in substantia gelatinosa neurons, effect of hypoxia (rat), **295**, 929
- Evolution**
- arylamine *N*-acetyltransferase genes: absence of evidence for horizontal transfer from bacteria to vertebrates, **293**, 783
  - bacteria, analysis based on FtsZ protein structures, **293**, 155
  - cathepsins expressed in placenta, **293**, 23
  - glandular kallikrein locus in *Mus musculus*, **299**, 305
  - human bi-directional histidyl-tRNA synthetase locus, **294**, 609
  - New World arenaviruses, **296**, 1118
  - and RNA world, Konrad Bloch special issue, **292**, 1267
  - systems approach, editorial, **297**, 689
  - thrifty genes for energy metabolism, **295**, 207
- Ewing sarcoma**
- lack of MMP-1 and MMP-3 expression, role of loss of accessibility of MMP regulatory element to fusion protein in vivo, **293**, 61; *erratum*, **295**, 573
- Excitotoxicity**
- glutamate, in primary hippocampal neurons, effect of gp130 stimulation, **295**, 532



- NMDA receptor-mediated, in hippocampal neurons, inhibitory effect of ginsenosides (rat), **296**, 247
- Exercise
- enhancement of adipocyte lipolysis, mechanisms (rat), **295**, 236
  - induction of muscle GLUT4 gene transcription, **292**, 409
  - low-intensity, over prolonged period, effects on PGC-1 mRNA expression in epitrochlearis muscle (rat), **296**, 350
  - prolonged, dissociation of AMPK activity and ACC $\beta$  phosphorylation in human muscle during, **298**, 309
  - upregulation of SREBP-1c and lipogenic genes, **296**, 395
- Exip
- identified as splice variant of p38 $\alpha$ , induction of earlier onset of apoptosis in HeLa cells, **291**, 838
- Exocrine secretory protein
- sorting to regulated secretory pathway in endocrine cells, **299**, 98
- Exocytosis
- in bone-resorbing osteoclasts, analysis by cloning and subcellular localization of Rab proteins, **293**, 1060
  - constitutive, polarization by effectors of Rho-family GTPases: neuritogenesis, **294**, 923
  - cyclic AMP-regulated, in parotid acinar cells, role of phospholipase D (rat), **299**, 663
  - cytoplasmic granules of CD8<sup>+</sup> cytotoxic T cells and natural killer cells, role of Fas ligand, **296**, 328
  - glutamate from osteoblasts, facilitation by ionotropic glutamate receptors, **297**, 452
  - HDL apolipoprotein receptor-mediated, of cellular lipids, **291**, 727
  - sequential, visualization in pancreatic islet  $\beta$  cells (rat), **292**, 980
- Exocytotic proteins
- downregulated expression in pancreatic islets of diabetic GK rat, **291**, 1038
- Exoenzyme S
- ADP-ribosylation activity, in vivo substrate specificity, **291**, 91
- Exon–intron boundaries
- TrkB gene (human), **290**, 1054
- Exonuclease
- related activity of pseudorabies virus DNase, stimulation by PRV DNA-binding protein, **293**, 1301
- Expressed sequence tags
- analysis of mRNAs expressed in neurula of Chinese amphioxus, **299**, 74
  - gene identification in liver of adult Atlantic salmon, **293**, 578
- EXT2 gene
- transgenic expression in developing chondrocytes, effects on heparan sulfate synthesis and bone formation (mouse), **292**, 999
- Extracellular domain
- mutated, in Fas of adult T cell leukemia cell line, conformational alteration of, **296**, 1251
- Extracellular matrix
- deposition in airways of murine asthma model, promotion by plasminogen activator inhibitor-1, **294**, 1155
  - Streptococcus mutans* binding to molecules of, **298**, 75
  - synthesis, induction in smooth muscle cells, effect of TGF- $\beta$  receptor-binding peptides, **293**, 1279
  - vascular endothelial cell adhesion to, role in Ets-1 upregulation of MMP-1, **291**, 130
- Extracellular matrix proteins
- expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
  - interaction with integrins in shear-activation of PI 3-kinase and JNK in endothelial cells, **292**, 892
  - metal-catalyzed oxidation, promotion of human mesangial cell apoptosis, **292**, 652
- Extracellular signal-regulated kinase
- activation by apelin (65–77) via PTX-sensitive G protein, **290**, 539
  - activation of iNOS, role in salivary mucin synthesis inhibition by *Porphyromonas gingivalis* LPS, **297**, 1149
  - coupling with activated ErbB1, facilitation by cytoskeletal association during keratinocyte differentiation, **295**, 1108
- EGF/ERK2 nuclear signaling, attenuation by Naf1, **297**, 17
- ERK1/2
- activation
    - in astrocytes under ischemia, **294**, 726
    - by boswellic acids in isolated PMNL, **290**, 185
    - in monocytes by LPS, effect of hepatitis B surface antigen, **297**, 486
  - mediation of PDGF-BB-stimulated vascular smooth muscle cell proliferation and migration on laminin-5, **293**, 1000
  - phosphorylation
    - in adrenal capillary endothelial cells, induction by EG-VEGF/prokineticins, **293**, 396
    - decrease in association with immune activation in HIV-1-infected individuals, **298**, 464
    - role in uPA induction by calcitonin in LLC-PK1 cells, **290**, 1483
  - role in dilinoleoylphosphatidylcholine effect on LPS-induced TNF- $\alpha$  generation in Kupffer cells of ethanol-fed rats, **294**, 849
  - role in inhibition of neoplastic transformation by transcriptional activation of p21<sup>Cip1</sup> by Drm/Gremlin, **295**, 1135
  - role in  $\beta_1$ -integrin activation by hypoxia in human vascular smooth muscle cells, **296**, 890
- ERK2
- gene expression, upregulation by BMP2, role of Sp1, **297**, 116
  - NGFI-B identification as substrate of, **291**, 1146
- G $\beta\gamma$  effects on G $\alpha_q$  signaling upon  $\alpha$ -adrenoceptor stimulation, **291**, 995
- hyaluronan binding protein 1 as endogenous substrate for, and HABP1 nuclear translocation on mitogenic stimulation, **291**, 829
- mediation of H<sup>+</sup>, K<sup>+</sup>-ATPase  $\alpha$  subunit gene expression, **290**, 1289
- Rac-ERK-dependent pathway, role in eotaxin induction of RBL-2H3 mast cell migration, **298**, 392
- Raf/ERK pathway, inhibition during muscle differentiation, role in cell cycle arrest induction by p38 MAPK activation, **298**, 765
- Ras-ERK pathway, role in TGF- $\beta$ 1 modulation of MMP-9 production in transformed keratinocytes, **296**, 267
- regulation of AP-1 activity in H<sub>2</sub>O<sub>2</sub>-induced G2/M arrest in p53-deficient human lung cancer cells, **293**, 1248
- role in CREB DNA binding activation by 50-Hz magnetic field, **296**, 1013
- role in disruption of gastric mucin synthesis by *Helicobacter pylori* lipopolysaccharide, **294**, 220
- role in MHC class II-mediated signal transduction in resting B cell line, **291**, 139
- role in muscle cell response to physical injury in vitro, **293**, 112
- role in stimulation of hepatocyte growth by EGF and G-protein-coupled receptor agonists, **291**, 588
- role in synergistic effects of fibronectin and FGF receptors on neuronal adhesion and neurite extension, **295**, 898
- role in TNF- $\alpha$ -induced apoptosis in mouse epidermal JB6-derived RT-101 cells, **295**, 24
- role in VEGF expression under high glucose conditions in glomerular podocytes, **290**, 177
- sustained MEK1-ERK1/2 pathway activation in membrane skeleton, dependence on cell adhesion in megakaryocyte differentiation, **297**, 664
- Extradiol dioxygenase
- steroid-inducible, identification of *Comamonas testosteroni* gene encoding, **294**, 560
- Eye
- expression of vertebrate ancient opsins Pal-VAM and Pal-VAL (smelt), **290**, 280
  - optineurin expression, effects of elevated intraocular pressure, **298**, 67



## F

- Falp**  
selectively expressed during adipose conversion of 3T3-L1 cells, identification, **293**, 1161
- Familial high-density lipoprotein deficiency**  
ATP-binding cassette transporter-1 mutations in Japanese patients, expression and functional analyses, **290**, 713
- Fanconi anemia protein**  
phosphorylation, regulation by Akt kinase, **291**, 628
- Farnesol**  
as inhibitor and substrate for rabbit liver microsomal P450 enzymes, **293**, 1
- Farnesylation**  
role in PEX19 biological function (human), **291**, 1180
- Farnesyl diphosphate synthase**  
inhibition by bisphosphonate NE21650, **290**, 869
- Farnesyltransferase**  
dominant negative  $\alpha$  subunit, inhibition of effects of insulin and IGF-I in MCF-7 cells, **291**, 458
- Fas**  
in adult T cell leukemia cell line, conformational alteration of mutated extracellular domain, **296**, 1251  
antibodies, or FasL, early apoptosis signaling in murine B lymphoma cells induced by, role of actin cytoskeleton, **290**, 268  
apoptosis induced by Fas  
lipid rafts in, role of death-inducing signalling complex (human), **297**, 876  
normal enterocyte susceptibility to, regulation on level of cIAP1 and 2, **290**, 1308  
resistance to, in leukemic cells resistant to 9- $\beta$ -D-arabinofuranosylguanosine (human), **298**, 338  
strong suppression by Clast5/Stra13, **292**, 121  
apoptotic signals mediated by, induction of ASC in human neutrophils, **293**, 1314  
apoptotic signal transduction induced by, suppression by thymidine phosphorylase independent of enzymatic activity, **295**, 300  
cell surface trafficking and surface and total expression in NIT-1 cells, **290**, 443  
expression during parturition in prostaglandin F receptor-deficient mice, **292**, 675
- Fas ligand**  
or anti-Fas antibodies, early apoptosis signaling in murine B lymphoma cells induced by, role of actin cytoskeleton, **290**, 268  
expression during parturition in prostaglandin F receptor-deficient mice, **292**, 675  
localization in cytoplasmic granules of CD8<sup>+</sup> cytotoxic T cells and natural killer cells: FasL role in granule exocytosis model of cytotoxicity, **296**, 328
- Fas resistance**  
HTLV-I-infected T cells with, blockade upstream of caspase cascade, cycloheximide effect, **294**, 714
- Fasting**  
activation of UCP3 gene expression independent of genes for lipid transport and oxidation in skeletal muscle, **294**, 301  
male mice, fall of plasma osteocalcin during, prevention by leptin, **295**, 475
- Fat**  
dietary, effect on stearoyl-CoA desaturase, **297**, 1259  
diet high in, effects on circulating levels of ghrelin (rat), **292**, 1031
- fat3**  
mammalian, multiple cadherin and EGF-like motifs, **290**, 1260
- Fat depots**  
autonomic neurons supplying, detection of leptin receptors, neuropeptide Y, and tyrosine hydroxylase (pig), **293**, 1138
- Fat loss**  
azaftig stimulation of in vitro lipolysis by rodent and human adipocytes, **293**, 847
- F<sub>1</sub>-ATPase**  
mitochondrial, nucleotide-independent Fe(III) binding site, localization on  $\beta$  subunit, **297**, 587
- Fat tissues**  
transplanted, cell survival and gene expression, effects of nutrition (mouse), **295**, 630
- $\Delta 9$ -Fatty acid desaturase**, *see* Stearoyl-CoA desaturase
- Fatty acids**  
biosynthesis  
bacterial, and Konrad Bloch's contributions, **292**, 1155  
Konrad Bloch as pioneer in, **292**, 1117  
stimulating factor for, Konrad Bloch special issue, **292**, 1273  
cardiac metabolism, role of remnant lipoprotein particle uptake into myocardium via VLDL receptor, **293**, 1007  
highly unsaturated  
 $\Delta^6$  desaturase suppression by, mediation by E-box-like sterol regulatory element, **296**, 111  
in liver, changes after induction of synthetic pathway, **299**, 832  
homeostasis during fasting, role of UCP3, **294**, 301  
intracellular free, downregulation of *ob* gene expression in 3T3-L1 adipocytes, **297**, 1291  
oxidation, inhibition by malonyl-CoA, association with fatty acid synthase inhibition in breast cancer cells, **285**, 217; *erratum*, **295**, 570  
potentiation of IL-1 $\beta$  toxicity in  $\beta$  cell line INS-1E, **296**, 189  
saturated and unsaturated, roles in  $\beta$ -cell apoptosis, **299**, 853  
uptake in muscle during prolonged exercise (human), **298**, 309
- $\delta$ -9 Fatty acids**  
phospholipid-containing, oxidation products impairing activity of tissue factor pathway inhibitor, **298**, 468
- Fatty acid synthase**  
gene transcription, inhibition by polyunsaturated fats, role of NF-Y, **290**, 1295  
inhibition in breast cancer cells, associated malonyl-CoA-induced inhibition of fatty acid oxidation and cytotoxicity, **285**, 217; *erratum*, **295**, 570  
insulin-stimulated gene expression, relationship to sterol response element binding protein 1 transcription in adipocytes, **291**, 439
- Fatty acid translocase/CD36**  
and GLUT4, localization in different cellular compartments in rat cardiac muscle, **293**, 665
- Fatty acid transport**  
FAT/CD36 and GLUT4 localization in different cellular compartments in rat cardiac muscle, **293**, 665
- F-box protein**  
Pof10, in fission yeast, isolation and characterization, **290**, 1399
- Fc receptors**  
Fc $\alpha$ / $\mu$ R, expression by human mesangial cells: candidate receptor for IgA deposition, **290**, 438  
Fc $\epsilon$ RI, expression in human basophilic KU812 cells, effect of peroxisome proliferator-activated receptor ligands, **297**, 193
- Feedback loops**  
interactivating, in mammalian clock, **290**, 933
- Feeding**  
hypocretin/orexin peptides as sensitive key relay for mediating, **296**, 129  
restricted, entrainment of peripheral clocks to, role of functional CLOCK, **298**, 198  
transient surge of ghrelin secretion before, in sheep  
analysis in scheduled meal-fed animals, **295**, 255  
modification by different feeding regimens, **298**, 785
- FeMo cofactor**  
*nifEN* genes specific to, functional expression as NifE-N fusion protein synthesizing unit in *Azotobacter vinelandii*, **299**, 233

- Fengycin synthetase  
FenE, amino acids activated by, **292**, 789
- Fenofibrate  
effects on abdominal and skeletal adiposity and insulin sensitivity in OLETF rat, **296**, 293  
gene expression changes induced by, in mouse liver, microarray analysis, **290**, 1114  
induction of selective increase of protein-bound homocysteine in rodents, **295**, 1052
- Fenton reaction  
role in mechanism of (–)-epigallocatechin-3-gallate induction of osteoclast cell death, **292**, 94
- Fer  
direct binding to plectin, negative regulation of kinase activity by, **296**, 904
- FERM domain  
localization of PTP-FERM in nerve processes by, **292**, 13
- Fermentative alcohol dehydrogenase  
AdhE, extensive overproduction by *rng* mutations, *rng*-interacting genetic factors causing, **295**, 92
- Ferric lignin peroxidase  
hexa-coordinate, spectrophotometric analyses with, **297**, 406
- Ferritin H/L-hybrid  
active human, and sequence effect on folding efficiency in *E. coli*, **298**, 225
- Ferritins  
insect, Konrad Bloch special issue, **292**, 1191
- Fertilization  
oocytes, Ca<sup>2+</sup> response to cyclic ADP-ribose during (starfish), **290**, 1015  
in *Sepia officinalis*: mollusk sperm-attracting peptide, **296**, 1186
- Ferutinine  
estrogen receptors  $\alpha$  and  $\beta$  liganded by, differential transcription activities (Umbelliferae family), **291**, 354
- Fetal Down syndrome  
aberrant expression of centractin and capping proteins in brain, **291**, 62  
brain, reduction of actin-related protein complex 2/3 in, **293**, 836
- $\alpha$ -Fetoprotein, *see* Alpha-fetoprotein
- Ffh  
*Streptococcus pneumoniae* homologue of SRP54 subunit of mammalian signal recognition particle, **292**, 601
- Fiber protein  
adenovirus type 2, globular region of, insertion of exogenous domain in, **296**, 897
- Fibrate  
and statin, as ligands for PPAR isotypes and effects on induction of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131
- Fibril formation  
 $\beta$ -amyloid peptide, inhibitors composed of KLVFF recognition element and flexible hydrophilic disrupting element, **290**, 121
- Fibrillar aggregates  
 $\beta$ -amyloid peptide, poly-L-lysine as potent dissolver in vitro, **291**, 764
- Fibrillarin  
binding to 3' *cis*-regulatory element in pre-mRNA of *uvr15*<sup>+</sup> in fission yeast, **294**, 1184
- Fibrin  
immobilized, binding by truncated vitronectin, **290**, 682
- Fibrin clots  
binding by truncated vitronectin, **290**, 682
- Fibrinogen  
binding to *Streptococcus mutans*, **298**, 75  
CD11c I domain loops critical for specific recognition of, **292**, 756  
 $\gamma$ -chain, precursor protein of, in plasma, identification in Alzheimer's disease, **293**, 1566
- Fibroblast growth factor 1  
minimal heparin/heparan sulfate sequences for binding to, **292**, 222
- Fibroblast growth factor 2  
augmentation of colony formation and PTH receptor and IGF-1 mRNA in mouse marrow stromal cells, **290**, 526  
induction of matrix metalloproteinase-9 secretion in MCF-7 cells by PKC activation of Ras/ERK pathway, **293**, 1174  
inhibitory effect on endochondral heterotopic ossification, **293**, 680  
mediation of tube-like structure formation by brain capillary endothelial cells, role of c-Fyn (mouse), **290**, 1354  
for use in sequential cellular de- and redifferentiation in tissue engineering using, **294**, 149
- Fibroblast growth factor 5  
inhibition of hair growth by blocking of dermal papilla cell activation, **290**, 169
- Fibroblast growth factor 8  
and FGF10, transgenic expression, and transdifferentiation of pancreatic islet cells into hepatocytes and exocrine cells, **292**, 138
- Fibroblast growth factor 10  
and FGF8, transgenic expression, and transdifferentiation of pancreatic islet cells into exocrine cells and hepatocytes, **292**, 138
- Fibroblast growth factor receptor  
and fibronectin, synergistic effects on neuronal adhesion and neurite extension, **295**, 898
- Fibroblast growth factor receptor 3  
isoforms, distinct functions in regulation of growth and cell morphology, **290**, 113  
soluble isoform, identification and characterization in SaOS-2 osteosarcoma cells, **292**, 378
- Fibroblasts  
acid  $\alpha$ -glucosidase gene transcription, activation by Hes-1 (human), **291**, 582  
apoptosis induction by elevated phospholipase D activity (rat), **298**, 474  
Bcl-2 promotion of p53-dependent senescence versus apoptosis without effecting G1/S transition, **298**, 282  
collagen gel contractile activity, bovine lactoferrin region promoting, identification (human), **299**, 813  
cyclooxygenase-2 expression in, induction by pyrrolidine dithiocarbamate (NIH 3T3 cells), **298**, 230
- dermal  
biomarkers identified using DermArray DNA arrays and bioinformatics methods (human), **291**, 1052  
chondrogenesis of, CD44 and hyaluronidase modulation during, **292**, 819  
high glucose-induced replicative senescence, **296**, 93  
membrane type 1-matrix metalloproteinase expression, induction by 4-methylumbelliferone (human), **298**, 646  
diploid, senescent, PDCD4 upregulation in human cells, **293**, 617  
double-stranded RNA-mediated signaling, block by monoclonal antibody against Toll-like receptor 3, **293**, 1364  
embryonic, SV40 large T-antigen-immortalized, calpain relationship to MMP-2 and u-PA expression in, **297**, 294  
growth, effect of EGF-like homeotic protein dlk (Balb/c 3T3 cells), **291**, 193  
human cytomegalovirus replication in, TCDD as possible activator (MRC-5 cells), **296**, 651  
Nijmegen breakage syndrome cells, IGF-I receptor expression at normal levels in, **296**, 62  
nuclear protein import, age-associated reduction (human), **294**, 354  
p130<sup>Cas</sup>-deficient, gene expression profile, **294**, 635  
rheumatoid synovial, overexpression of genes causing tumor-like growth of rheumatoid synovium, **294**, 1121  
sensitization to TNF-induced apoptosis, roles of DNA fragmentation factor and poly(ADP-ribose) polymerase-1, **290**, 796;  
*erratum*, **291**, 191



- transduced, TEL-induced aggregation and tube formation (NIH3T3-UCLA cells), **291**, 820
- transformed state, regulation by calpastatin via protein kinase C  $\epsilon$  (NIH3T3 cells), **290**, 510
- tubulo-interstitial, cocultured with tubular epithelial cells, analysis of TGF- $\beta$ 1 and HGF roles in epithelial-mesenchymal interactions, **297**, 255
- v-src oncogene-transformed, increased activity of c-Src and Csk in, **290**, 790
- v-Src-transformed, protrusions in, stimulation by phospholipase D2, **293**, 201
- Fibrogenesis
- early-phase, induced in liver by CCl<sub>4</sub>, prevention by pioglitazone, **291**, 55
- Fibronectin
- cell adhesion changes on, role of rac (*Xenopus laevis*), **298**, 364
- and FGF receptors, synergistic effects on neuronal adhesion and neurite extension, **295**, 898
- gene expression in hepatocytes, activation by NF- $\kappa$ B (rat), **297**, 1218; *erratum*, **299**, 167
- promoter occupation and function in sinusoidal endothelial cells and hepatocytes, **295**, 1077
- role in regulation of plasminogen activator inhibitor-1 gene expression in anchorage-dependent cells, **291**, 185
- TGF- $\beta$ -induced expression mesangial cells, mediation by Smad3 (mouse), **296**, 1356
- Fibulin-1
- interaction with oncogenic papillomavirus E6 proteins, **296**, 962
- Filamentation
- yeast oxysterol-binding protein homolog *OSH3* as multicopy enhancer of, **293**, 733
- 5T4
- interaction with PDZ protein TIP-2/GIPC, implications for metastasis, **290**, 1030
- Fixation
- and apparent cell membrane translocation caused by positively charged DNA-binding proteins, **291**, 367
- FK506 binding protein
- (<sup>15</sup>N,<sup>13</sup>C)-labeled, resonance assignments using protocol based on HN(C)N experiment, **293**, 427
- FKBP12.6
- binding to RyR2 calcium channel, effects of ARVD2 and VTSIP mutations, **299**, 594
- FKLF2
- interaction with CBP through multiple domains, **296**, 118
- Flavin-containing monooxygenase 2
- truncated protein, encoding by *FMO2* gene, **292**, 558
- Flavin reductase system
- bacterial, reduction of chromate to soluble chromium(III)-NAD<sup>+</sup> complex, **294**, 76
- Flavonoids
- 2,6-dihydroxyacetophenone as antioxidant pharmacophore in, **295**, 9
- role in anti-inflammatory and antioxidant properties of EM-X, **296**, 1148
- xanthine oxidase-inhibiting, molecular modeling, **294**, 167
- Flavopiridol
- inhibition of cyclin-dependent kinase 9, structural basis, **293**, 566
- Flavoprotein
- A-type, *Synechocystis*, module fusion in, condensation of multiple-component pathway in single polypeptide chain by, **294**, 82
- reduction, in single mitochondria, fluorescence imaging, **290**, 23
- Flesh firmness
- zucchini squash after chilling, effects of infiltrated polyamines, **295**, 98
- Flexible hydrophilic disrupting element
- and KLVFF recognition element, inhibitors of  $\beta$ -amyloid peptide fibril formation and cytotoxicity composed of, **290**, 121
- Fli-1* proto-oncogene
- expression induction by IL-6 via STAT3, **292**, 287
- fl* mutant
- $\beta$ -tubulin-like cDNA expressed specifically in elongating cotton fibers of, induction of longitudinal growth of fission yeast, **296**, 1245
- Flow cytometry
- detection of cell surface expression of specific antigenic site on catalytic subunit of Na<sup>+</sup>,K<sup>+</sup>-ATPase, **291**, 111
- fluorescence energy transfer measurements of membrane topography of MHC-I and ICAM-1 in IFN- $\gamma$ -treated colon carcinoma cells, **290**, 635
- Flp recombinase
- transgenic C57BL/6 mouse strain for conditional gene targeting, **293**, 953
- Flt-1
- soluble, in mammals, phylogenetic conservation in avians, **291**, 554
- Fluconazole
- downregulation of metallothionein expression and effect on copper cytotoxicity in *Microsporium canis*, **299**, 688
- Fluid flow
- induction of COX-2 expression in MC3T3-E1 osteoblasts via PKA signaling pathway, **297**, 46
- Fluorene
- catabolism, genes for, dispersion on *Terrabacter* sp. DBF63 genome, **296**, 233
- Fluorescence
- cyclic nucleotide phosphodiesterases from plant, yeast, and *E. coli*, **291**, 875
- steady-state, analysis of melittin-GM1 interaction, **292**, 579
- tyrosine-dominated emission from spinach photosystem II-derived 33-kDa protein, **293**, 593
- Fluorescence assay
- locust chemosensory protein binding properties, **293**, 50
- Fluorescence energy transfer
- flow cytometric measurements of membrane topography of MHC-I and ICAM-1 in IFN- $\gamma$ -treated colon carcinoma cells, **290**, 635
- Fluorescence imaging
- metabolic responses in single mitochondria, **290**, 23
- Fluorescence intensity
- analysis of early apoptotic events in individual cells using, **290**, 1573
- Fluorescence plate reader
- high-throughput measurements of mitochondrial membrane potential in neural cell line, **298**, 750
- Fluorescence polarization
- analysis of early apoptotic events in individual cells using, **290**, 1573
- Fluorescence resonance energy transfer
- lens  $\alpha$ A-crystallin: decreased subunit exchange after heat treatment, **293**, 7
- 1-pyrenebutanol binding by cytochrome P450eryF, **294**, 806
- Fluorescence spectroscopy
- Na<sup>+</sup>/K<sup>+</sup>-ATPase  $\alpha$  subunit ATP-binding site: role of Phe<sup>475</sup>, Glu<sup>446</sup>, and Ser<sup>445</sup>, **297**, 154
- quercetin interaction with human serum albumin, **299**, 400
- Fluorescent lipid amphiphiles
- solubility in membranes, effects of phase properties and head group, **296**, 596
- Fluorinated analogs
- L-(3,4-dihydroxyphenyl)alanine and L-threo-(3,4-dihydroxyphenyl)-serine, as substrates for Dopa decarboxylase, **295**, 107
- Fluorinated L-Dopa analogs
- as substrates for Dopa decarboxylase, **295**, 107
- Fluvastatin
- and fibrates, as ligands for PPAR isotypes and effects on induction of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131
- Fly-like putative transporters
- human cDNAs homologous to *Drosophila Orct* and mammalian carnitine transporters, **297**, 1159



- f-Met-Leu-Phe  
 promotion of neutrophil adherence to human osteoblasts, **296**, 759
- FMO2* gene  
 encoding of truncated protein in rat, **292**, 558
- FMRI*  
 silencing, and signals to chromatin: unified model of transcriptional regulation, **295**, 575
- Fn14  
 interaction with TWEAK, pro-inflammatory effect on human umbilical vein endothelial cells, **299**, 488
- Foam cells  
 cholesterol-loaded, apolipoprotein E levels, modulation by glycosphingolipids, **290**, 1361  
 formation, role of PPAR $\gamma$ , **290**, 707
- Focal adhesion kinase  
 amino-terminal domain, targeting in HEK 293 and MDCK cells, **299**, 62  
 direct phosphorylation by *c*-src, **294**, 293  
 inhibitors of, attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72  
 mutated, induction of apoptosis in T98G glioma cells, **293**, 174  
 role in hyaluronan-dependent MMP-2 secretion in human small-cell lung carcinoma QG90 cells, **290**, 1123
- Folate receptor  $\beta$   
 selective binding of 10-nitrofolate to, **297**, 1238
- Folding intermediates  
 unfolding proteins, binding by phage display-selected aggregate-binding peptides, **291**, 903
- Folic acid  
 nitration and chlorination by peroxynitrite and hypochlorous acid, **297**, 1238
- Follicle-associated epithelia  
 overlying Peyer's patches of small intestine, evaluation of in vitro model, **299**, 377
- Follicle-stimulating hormone receptor  
 gene expression, regulation by cross-talk of Kruppel transcription factors, **295**, 1096
- Follicular dendritic cells  
 from knock-in mouse, bioassay for human prions with, **294**, 280
- Food-borne carcinogens  
 heterocyclic amines, editorial, **296**, 1037
- Food intake  
 effects of centrally administered apelin-13 (rat), **291**, 1208  
 increase by ghrelin (rat), **299**, 739
- Food restriction  
 effects on aging-related increase of SOCS-3 expression in hypothalamus (rat), **296**, 425
- Foot-and-mouth disease virus  
 major serotypes, detection method, **297**, 267
- Footprint site  
 FP3, human placental leucine aminopeptidase/oxytocinase gene promoter, binding to AP-2 and Ikaros, **290**, 1048
- Force–frequency relationship  
 in wild-type and creatine kinase-deficient hearts (mouse), **298**, 163
- Force measurement  
 actin filament branching caused by Arp2/3 complex and N-WASP, **293**, 1550
- forDABGEF*  
 encoding five-subunit 2-oxoglutarate:ferredoxin oxidoreductase from *Hydrogenobacter thermophilus* TK-6, **292**, 280
- Formylation  
 acid-labile, HIV-1 p24<sup>gag</sup> N-terminal proline, detection by proteomics using 2D gel and MALDI-TOF-MS, **293**, 1107
- Formyl peptide receptor  
 fusion protein with G $\alpha_2$ , reduction of adenylyl cyclase activity, **298**, 824
- Forskolin  
 MUC5AC secretion from pancreatic cancer cells in response to, **294**, 680
- 14-3-3 protein  
 binding to chk1 in BNP1350-resistant cells, **295**, 435
- 14-3-3 $\gamma$  protein  
 association with actin, role in cell division and apoptosis in astrocytes, **296**, 657
- Fragile X mental retardation  
*FMRI* silencing and signals to chromatin: unified model of transcriptional regulation, **295**, 575
- Fragile X mental retardation proteins  
 binding of RNA, species and isoform specificity (human, mouse), **292**, 1063
- Free radicals  
 role in desialylation, **297**, 502  
 scavenging  
 by antioxidant cocktail EM-X, **296**, 1148  
 genes involved in, targeted expression measurements in islets of Langerhans, reproducibility (human), **298**, 350
- Fructose  
 effects on  $\alpha$ -chymotrypsin structure and activity, **293**, 416  
 metabolite D-glyceraldehyde, inhibition of mitochondrial permeability transition, **291**, 215; *erratum*, **292**, 787
- Fructose-2,6-bisphosphate  
 binding to muscle phosphofructokinase, role of Ser530, Arg292, and His662 (rabbit), **290**, 670
- Fruit  
 zucchini squash, effect of infiltrated polyamines on polygalacturonase activity and chilling injury responses, **295**, 98  
 zucchini squash, physiological responses to chilling injury in excised discs, effects of peptic oligomers, **290**, 577
- Fruiting bodies  
 edible mushroom *Lyophyllum shimeiji*, isolation of agglutinin with complex carbohydrate binding efficiency, **290**, 563  
 mushroom *Pleurotus pulmonarius*, potent ribonuclease from, **293**, 857
- Fruitless protein  
 male-specific, and Yellow, immunohistochemical colocalization in *Drosophila melanogaster* neuroblasts, **293**, 1262
- FtsH  
 FtsH–unfolded protein complex stabilization by binding of ATP and blocking of protease, **296**, 8
- ftsZ* gene  
*Mycoplasma hominis*, characterization and sequence variability in clinical isolates, **293**, 155
- L-Fucose kinase  
 amino acid sequence, **294**, 650
- Fucose sulfate polymer  
 from egg, induction of sperm acrosome reaction (sea urchin), **296**, 833
- Fullerene  
 water-soluble derivative, cellular localization, **294**, 116
- Fungi  
 polyketides, and yeast hydroxy fatty acids: Konrad Bloch special issue, **292**, 1213
- Furanoterpenoids  
 lower, biosynthesis of  $\beta$ -substituted furan cytoskeleton in, **290**, 589
- Furan skeleton  
 $\beta$ -substituted, biosynthesis in lower furanoterpenoids, **290**, 589
- Fusion peptides  
 viral, and identification of membrane-interacting segments, **293**, 1153
- Fusion protein F  
 measles virus, core of, formation of stable coiled-coil trimer, **299**, 897

## Fusion proteins

- anthrax toxin LF<sub>254</sub>–GAL4DBD, with protective antigen, delivery of DNA into mammalian cells by, **297**, 1121
- maltose-binding protein–NusG P1' variants, efficiency of processing by TEV protease, **294**, 949
- TAK1–TAB1: constitutively active MAP3K stimulating AP-1 and NF- $\kappa$ B signaling pathways, **297**, 1277
- TAT, transduction into osteoclasts and osteoblasts, **299**, 505

## Fusion system

- phage coat protein III, functional improvement of antibody fragments using, **298**, 566

## Fv

- functional improvement of scFv with phage coat protein III fusion system, **298**, 566
- human, selection on basis of stabilization of variable domain in presence of target antigens, **295**, 31

## Fyn

- alternatively spliced isoform, **298**, 501

## Fyn substrate

- Src family kinase-dependent phosphorylation of 29-kDa caveolin-associated protein, **290**, 1447

## FYVE finger

- myotubularin-related protein hMTMR3 containing, potential functional redundancy with hMTM1 and hMTMR2, **291**, 305

## G

*GADD45B*

- mRNA expression, induction by tissue factor pathway inhibitor, **299**, 847

*GADD153* gene

- oxidative stress-induced expression in vascular smooth muscle cells, mechanism, **290**, 1255

## D-Galactosamine

- effect on hepatic mRNA profiles, **290**, 518
- hepatocellular injury induced by, protective effect of L-alanine, mechanisms, **291**, 738

## Galactose-binding lectin

- from seeds of champedak, subunit sequences and interactions with human O-glycosylated glycoproteins, **295**, 1007

 $\beta$ -Galactosidase

- activity in bacteria, measurement in 96-well arrays, **290**, 397; *erratum*, **292**, 292

 $\beta$ -1,4-Galactosyltransferase

- as molecular mechanical device, **291**, 1113

## Gallbladder epithelial cells

- cAMP-activated K<sup>+</sup> channels (guinea pig), **290**, 1564

## Gammaherpesviruses

- dihydrofolate reductase encoding, **297**, 756

## Gangliosides

- GM1, interaction with melittin, as model for side-by-side complex, **292**, 579

*Ganoderma lucidum*

- suppression of motility of highly invasive breast and prostate cancer cells, **298**, 603

## GAP31

- production in cucurbits using plant virus vector ZYMV-AGII, **292**, 441

## GAP-43

- interaction with protein kinase C  $\gamma$ , modulation by palmitoylcarnitine, **294**, 823

## Gap junctions

- cell–cell communication via, role in NBT-II carcinoma behavior, **294**, 108

## GAS1

- interaction with EGF-like homeotic protein dlk in yeast two-hybrid system, **291**, 193

## Gastric cancer

- cancer/testis antigen gene *CAGE* identification and characterization, **292**, 715

## Gastric cancer cells

- growth, inhibition by anticancer drugs, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480

## Gastric epithelial cells

- Helicobacter pylori*-induced vacuolation and VacA internalization, modulation by extracellular pH, **292**, 167

## Gastric mucosa

- conversion to intestinal metaplasia in Cdx2-expressing transgenic mice, **294**, 470

## Gastric mucosal cells

- mucin synthesis, disruption by *Helicobacter pylori* lipopolysaccharide, role of ERK and p38 MAP kinase, **294**, 220

## Gastrin response element

- GAS-RE3, in human histidine decarboxylase gene promoter, identification and characterization, **297**, 1089

## Gastrointestinal cancer cells

- mucin MUC17 expression, **291**, 466

## Gastrointestinal tract

- aquaporin 10 expression: mouse AQP10 gene identification as pseudogene, **294**, 630

## GC-box

- Sp1/Sp3-binding, required for transcription of murine class II tumor suppressor gene H-rev107, **293**, 793
- Sp1/Sp3-binding, role in induction of H-rev107 gene expression by growth arrest and histone acetylation, **294**, 63

*GCN4*

- regulation of *GDH1* expression under respiratory growth, **293**, 79

## GC-rich elements

- flanking SNURF gene transcription start site, strong transcriptional activation by, **291**, 897

*GDH1*

- expression, regulation by *GLN3*, *GCN4*, and *HAP4* under respiratory growth, **293**, 79

## GDP

- binding to Cdc42, analysis using urea interaction, **291**, 1276

## Gefl protein

- association with chloride channel activity (*Saccharomyces cerevisiae*), **294**, 1144

Gelatinase A, *see* Matrix metalloproteinase-2Gelatinase B, *see* Matrix metalloproteinase-9

## Gelatinases

- levels in male and female breast cancer, **292**, 161

## Gel electrophoresis

- pulsed field, determination of DNA fragmentation in apoptotic human lymphocytes, **294**, 872

## two-dimensional

- cysteine-rich calcium-binding S100A3 protein from human hair cuticle, **299**, 857
- in detection by proteomics of acid-labile formylation of HIV-1 p24<sup>gag</sup> N-terminal proline, **293**, 1107
- identification of exoenzyme S ADP-ribosyltransferase substrate specificity, **291**, 91

## Gelonin

- uptake and intracellular fate in rat liver, **296**, 1180

*Gelonium* anti-HIV protein

- production in cucurbits using plant virus vector ZYMV-AGII, **292**, 441

## Gender differences

- gene expression of organic anion transporters (rat), **290**, 482
- serum bisphenol A levels, **291**, 76
- in steroid modulation of angiotensin II-induced protein kinase C activity in anterior pituitary of rat, **294**, 95

## Gene amplification profiling

- esophageal squamous cell carcinomas by DNA array CGH, **296**, 152

- Gene electrotransfer  
into skeletal muscle, description and physiological applicability of pulse generator, **296**, 443
- Gene expression  
109 apoptosis pathway-related genes in 82 mouse tissues and experimental conditions, **297**, 537  
age-dependent, analysis by oligonucleotide microarray data mining, **298**, 772  
BRCA1-induced, in breast cancer cells, **299**, 839  
dehydration- and cold-induced, ERF/AP2 domain of *Arabidopsis* DREBs involved in, DNA binding specificity, **290**, 998  
DNA microarray analysis of genes elicited by ultrasound in U937 cells, **290**, 498  
global, in renal ischemia–reperfusion in mouse, **291**, 787  
during glucocorticoid-induced apoptosis, patterns of, analysis with oligonucleotide arrays, **293**, 1254  
in heart, altered profile induced by chronic nicotine consumption effects (rat), **297**, 729  
identification of sodium butyrate-responsive genes in colonic epithelial cells, **293**, 1287  
in immature and mature bone marrow-derived dendritic cells, analysis using DNA arrays, **290**, 66  
in kidney, global analysis of differentially expressed genes during progression of calcium oxalate nephrolithiasis, **296**, 544  
in liver  
adult Atlantic salmon, EST-based gene identification, **293**, 578  
during bacteria-induced fulminant hepatitis, profile analysis by cDNA microarray system, **298**, 675  
changes induced by PPAR $\alpha$  agonists, microarray analysis (mouse), **290**, 1114  
liver function genes activated by injury or stress, mRNA profiles in lethal and nonlethal rat models, **290**, 518  
in muscle, effects of electroporation and plasmid vector with SV40 enhancer elements, **298**, 505  
oxygen-regulated, hypoxic induction in mitochondrial DNA-depleted HeLa cells, **297**, 346  
regulation  
efficient isolation of regulatory sequences from human genome and BAC DNA, **290**, 1079  
by human orthologs of *Drosophila* heterochromatin protein 1, **293**, 1217  
by salt stress and hyperosmotic stress in *Synechocystis* sp. PCC 6803, **290**, 339  
relationship to histone H3 acetylation in variable regions of TCR $\beta$  locus, **298**, 420  
in retinoic acid-induced differentiation of acute promyelocytic leukemia NB4 cells and HL-60 cells, **296**, 1125  
in small samples, analysis by multiplex standardized RT-PCR, **293**, 509  
spontaneously hypertensive and Wistar–Kyoto rats, differences in animals from two sources, **296**, 537  
targeted, measurements in islets of Langerhans, reproducibility (human), **298**, 350  
in transplanted fat tissues in mice, effects of nutrition, **295**, 630  
in zebrafish development, profiling, and cDNA microarray construction, **296**, 1134
- Gene replacement  
in yeast, restoration of functional checkpoint response by human CDC25B and CDC25C after, **295**, 673
- Gene silencing  
by preformed small RNA duplexes in mammalian cells, **295**, 744
- Gene targeting  
conditional, Flp recombinase transgenic C57BL/6 mouse strain for, **293**, 953  
by homologous recombination, **297**, 1
- Gene therapy  
adenovirus-mediated transfer of murine IFN- $\gamma$  receptor, effect on IFN- $\gamma$  efficacy in vivo, **290**, 1042  
bone formation induction in vivo by adenovirus-mediated direct transfer of bone morphogenetic protein-4, **298**, 121  
bone repair enhancement by helper-dependent adenoviral transfer of BMP-2, **297**, 523  
dystrophin expression in skeletal muscles of *mdx* mice using short MCK 1350 promoter/enhancer, **292**, 626  
erectile function enhancement in rat by adeno-associated virus-mediated gene transfer of dominant negative RhoA, **298**, 427  
gene electrotransfer into skeletal muscle for, description and physiological applicability of pulse generator, **296**, 443  
gene expression in muscle after electroporation with plasmid vector with SV40 enhancer elements, **298**, 505  
in vitro transfer of antisense oligodeoxynucleotides into coronary endothelial cells by ultrasound, **298**, 587  
micro-dystrophin cDNA effects on dystrophic phenotypes in transgenic *mdx* mice, **293**, 1265  
suicide gene, of human hepatoma and peritonitis carcinomatosis by vector of replicative-deficient HSV, **291**, 855
- Genetic instability  
cyclin E overexpression-induced, role of aberrant homologous recombination, **296**, 363
- Genetic linkage  
between *CYP2C8* and *CYP2C9* genetic polymorphisms, **299**, 25
- Genetic reporter system  
pRL-TK and phRG-B in, effects of Nurrl, **294**, 1036
- Gene transfer  
adeno-associated virus-mediated, dominant negative RhoA, enhancement of erectile function in rat, **298**, 427  
adenoviral, of BMP-2 in mesenchymal stem cells, **292**, 144  
heme oxygenase-1 gene into endothelial cells, attenuation of oxidative stress effects on cell cycle, **291**, 68  
horizontal, arylamine *N*-acetyltransferases from bacteria to vertebrates, absence of, **293**, 783  
to lung, proteolipidic vectors for, **290**, 1489  
phage-mediated, effect of nuclear localization signal, **297**, 779  
polyethylenimine-mediated suicide gene transfer, therapeutic effect on hepatocellular carcinoma in vivo, **291**, 48  
to synovium in vivo by electroporation, **293**, 1530
- Genistein  
effects on phospholipase D activity and degranulation in stimulated neutrophils, **292**, 951  
regulation of Akt, implications for mechanism of EGF-R inhibitor-enhanced TRAIL-induced apoptosis, **295**, 515
- Genome  
human, DNA, efficient isolation of regulatory sequences, **290**, 1079
- Genome-wide multilocus analysis  
for immune-mediated complex diseases, **295**, 771
- Genomic imprinting  
*Mas* protooncogene, restriction to antisense RNA (mouse), **290**, 1072  
paternal, G $\alpha_s$  in human thyroid, role in TSH resistance in pseudohypoparathyroidism type 1a, **296**, 67  
paternally expressed gene *Peg12/Frat3* in mouse 7C region homologous to Prader–Willi syndrome region, **290**, 403
- Genotoxins  
proteolytic release from cooked beef, **293**, 1497
- Genotyping assay  
for *CYP2A6*\*7, and \*8, and identification of *CYP2A6*\*10, in Japanese, Chinese, and Caucasians, **290**, 318
- Gentamicin  
induction of pH-sensitive activation of calcium-sensing receptor, **297**, 71
- Germ cells  
development, role of p59<sup>scf</sup> (mouse), **292**, 992



## Germination

- aerial spores of *Streptomyces granaticolor*, protein expression and protein kinase activity during, **299**, 335
- temporal generation of multiple antifungal proteins in primed seeds, **292**, 236

## Germline transcription

- IgE heavy chain in DND39 B cells, inhibition by PPAR- $\gamma$  ligands, **295**, 547

## GEX-3

- molecules interacting with, isolation by novel functional screening in nematodes, **292**, 697

GFP/LGS, *see* Green fluorescent protein–rat-liver glycogen synthase

## GGA coat protein

- membrane association, inhibition by BIG2 dominant-negative mutant: effects on membrane trafficking from *trans*-Golgi network, **294**, 254

## GGA repeats

- mononucleosomes assembled on DNA fragment containing (GGA/TCC)<sub>n</sub> repeats, formation of DNA–DNA complex, **290**, 16

## G–G:C triplex

- Klenow exo<sup>−</sup> traversal by melting G–G base pairs, **295**, 730

## G–G hairpin

- Klenow<sup>+</sup> block at Klenow exo<sup>−</sup> mechanism of traversal through G–G:C triplex, **295**, 730

## Ghrelin

- circulating levels, effects of macronutrients in ingested diet (rat), **292**, 1031
- effects on anxiety-like behavior and memory retention (rat), **299**, 739
- secretion, transient surge before feeding
- modification by different feeding regimens (sheep), **298**, 785
- in scheduled meal-fed sheep, **295**, 255

## Gibberellin

- signaling, role of Ca<sup>2+</sup>-dependent protein kinase components downstream of RuBisCO activase, **290**, 690

Gibberellin A<sub>4</sub>

- antibody to, liganded 4-B8(8)/E9 Fab fragment, crystal structure, **293**, 489

## Gilbert's syndrome

- associated defect in UGT1A1 gene promoter, identification, **292**, 492

## Gingival epithelial cells

- iNOS expression and NO production, upregulation by IL-15, **297**, 329

## Ginsenosides

- inhibitory effect on NMDA receptor-mediated signals in hippocampal neurons (rat), **296**, 247

GIP, *see* Glucose-dependent insulinotropic polypeptide

## GJB2

- frequency and functional studies of common alleles in hearing loss, **296**, 685

## GJB6 gene

- skin disease- and deafness-associated mutations, functional studies (human), **298**, 651

## Glaucoma

- optineurin gene linked to, expression of, effects of elevated intraocular pressure, **298**, 67

## Glia

- expression of brain- and testis-specific immunoglobulin superfamily protein in vitro, **296**, 1215

## Glial cells

- mitochondria, tricarboxylate carrier BBG-TCC localization in, **295**, 463

## Glia maturation factor

- overexpression in astrocytes, initiation of immune activation of microglia via GM-CSF secretion, **294**, 238

## Gliogenesis

- in P19 cells, promotion by Wnt-1, **293**, 167

## Glioma cells

- apoptosis, induction by mutated focal adhesion kinase (T98G cells), **293**, 174
- gene silencing by preformed small RNA duplexes (U87-MG cells), **295**, 744
- hypocrellin-A and -B photodynamic therapy, effects on release of angiogenesis regulators (LN229 cells), **298**, 520
- intracellular zinc distribution and transport (C6 cells), **296**, 923
- matrix metalloproteinase-9 expression induced in, inhibition by PDGF via PI 3-kinase-dependent pathway (C6 cells), **296**, 864
- role in store-mediated calcium entry into, role of actin cytoskeleton (C6 cells), **296**, 484
- TGF- $\alpha$ -driven growth, inhibition by EGF receptor-specific tyrosine kinase inhibitor (U-1242 MG clones), **290**, 349

## GLN3

- regulation of *GDH1* expression under respiratory growth, **293**, 79

 $\alpha^D$ -Globin

- chicken, residues 1–40, synthetic peptide with, stimulation of lipid kinases and Ca<sup>2+</sup> signaling in *Trypanosoma cruzi*, **293**, 314

## Globomycin

- restoration of antibiotic susceptibility to resistant *Enterobacter aerogenes* strains, **293**, 1370

## Globotetraose

- related LPS, biosynthesis, role of *Haemophilus influenzae* strain Rd *N*-acetylgalactosaminyltransferase, **295**, 1

## Glomerular mesangium

- immune complex deposition in IgA nephropathy, candidate Fc $\alpha$ / $\mu$  receptor, **290**, 438

## Glucagon

- role in glucose homeostasis (mouse), **290**, 839

## Glucagon-like peptide-1

- degradation by dipeptidylpeptidase IV, effects of metformin, **291**, 1302; comment, **296**, 229
- regulation of *pdx1* gene promoter in pancreatic beta cells, **299**, 277

- secretion, enhancement by biguanide compounds, **298**, 779

## Glucagon receptor

- gene encoding, targeted disruption: control of glycemia (mouse), **290**, 839

## Glucocorticoid receptor

- coactivator activity of HIV-1 Vpr, enhancement by TFIIF components, **298**, 17
- functional interaction with pro-apoptotic DAP3, **295**, 749

Glucocorticoid receptor  $\alpha$ 

- mRNA, quantitative analysis in inflammatory bowel disease, **296**, 1286

Glucocorticoid receptor  $\beta$ 

- mRNA, quantitative analysis in inflammatory bowel disease (human), **296**, 1286

## Glucocorticoids

- apoptosis induced by, gene expression patterns during, analysis with oligonucleotide arrays, **293**, 1254
- attenuation of TNF- $\alpha$ -induced apoptosis in granulosa cells, role of modulation of Bcl-2, **294**, 51
- induction of glutamine synthetase expression in hepatoma cells, **296**, 1026
- modulation of dendritic cells, **297**, 645
- modulation of hypothalamic hypocretin/orexin mRNA expression, **296**, 129
- regulation of CCSP and *CYP2B1* promoters via C/EBP $\beta$  and  $\delta$  in lung cells, **293**, 907
- regulation of tripeptidyl-peptidase II activity in skeletal muscle during sepsis, **296**, 41

## Gluconeogenesis

- hepatic, effect of streptozotocin-induced diabetes: selective upregulation of system A transporter mRNA, **290**, 903

- Glucosamine  
impairment of glucose transport by osmotic shock and vanadate, **292**, 308
- Glucose  
blood levels in ob/ob and db/db mice, effects of acute and chronic treatment with AICAR, **294**, 798  
effects on  $\alpha$ -chymotrypsin structure and activity, **293**, 416  
formation by salivary amylase activity, mechanism: role of subsite S2' residues, **292**, 468  
high level, induction of VEGF via PKC and ERK in glomerular podocytes, **290**, 177  
induction of insulin secretion  
impairment in diabetic GK rats, and protein-tyrosine phosphatase  $\sigma$  overexpression, **291**, 945  
role of pyruvate dehydrogenase activation, **291**, 1081  
insulin-stimulated transport, decrease after chronic insulin treatment, prevention by rapamycin, **293**, 1021  
liberation by *Thermotoga maritima* amylolytic enzyme from reducing end of substrates, **295**, 818  
metabolism through pentose phosphate pathway in erythrocytes, O<sub>2</sub>-dependent stimulation by *S*-nitrosocysteine (human), **294**, 829  
optical solid-state sensor using immobilized glucose oxidase, **296**, 1069  
regulation of GAD<sub>67</sub> gene transcription in islets of Langerhans, mediation by PDX-1, **295**, 243  
regulation of *pdx1* gene promoter in pancreatic beta cells, **299**, 277  
stimulation of acyl-coenzyme A:diacylglycerol acyltransferase mRNA expression, **298**, 317  
toxicity to cultured retinal pericytes, potentiation by sorbitol dehydrogenase overexpression, **299**, 183  
transcriptional regulation of *mif* gene in insulin-secreting cells, **295**, 174  
transport by osmotic shock and vanadate, impairment by glucosamine, **292**, 308  
uptake by adipocytes  
in cells cultured from lean and overweight rats, effects of  $\beta$ 3-adrenergic agonist, **291**, 1201  
stimulation by shikonin via insulin-independent tyrosine kinase pathway (3T3-L1 cells), **292**, 642  
uptake in muscle  
during prolonged exercise (human), **298**, 309  
promotion by leucine (rat), **299**, 693
- Glucose-dependent insulinotropic polypeptide  
enzyme-resistant antagonist, cellular and metabolic effects, **290**, 1420
- Glucose oxidase  
immobilized, optical solid-state glucose sensor using, **296**, 1069
- Glucose-6-phosphatase  
three amino-terminal transmembrane segments, membrane topogenesis on endoplasmic reticulum, **292**, 153
- Glucose starvation  
effects on VEGF mRNA isoform expression and stability in ovarian cancer cells (mouse), **292**, 860  
strong tolerance to, conferral by AICAR in 5'-AMP-activated protein kinase-dependent fashion, **290**, 263
- Glucose tolerance  
effect of targeted disruption of glucagon receptor gene (mouse), **290**, 839
- Glucose transporters  
GLUT4, *see* GLUT4
- $\alpha$ -Glucosidase  
intestinal, partial characterization (mouse), **295**, 394  
*Thermotoga maritima* amylolytic enzyme resembling, liberation of glucose from reducing end of substrates, **295**, 818
- Glucosylceramide  
modulation of apolipoprotein E levels in macrophages and cholesterol-loaded foam cells, **290**, 1361
- Glucosyl transferase inhibitor  
modulation of membrane-bound and soluble CD54 expression in endothelial cells, **296**, 26
- GLUT4  
in adipocytes, levels after chronic insulin treatment, effect of rapamycin, **293**, 1021  
expression, effects of exercise training, **296**, 395  
and fatty acid translocase/CD36, localization in different cellular compartments in rat cardiac muscle, **293**, 665  
gene transcription, induction in muscle by exercise, **292**, 409  
in skeletal muscle, levels in ob/ob and db/db mice, effects of acute and chronic treatment with AICAR, **294**, 798
- Glutamate  
biosynthesis, *GDH1* gene involved in, expression regulation by *GLN3*, *GCN4*, and *HAP4* under respiratory growth, **293**, 79  
excitotoxicity in primary hippocampal neurons, effect of gp130 stimulation, **295**, 532  
glial release, stimulation by L-trans-PDC release: enhancement of hippocampal neuronal activity, **295**, 376  
induction of p35 cleavage to p25, cdk5 activation, and tau dephosphorylation, **298**, 693  
release in osteoblasts, facilitation by ionotropic glutamate receptors, **297**, 452  
synchronization and phase-resetting of immortalized suprachiasmatic nucleus cell line, **298**, 133
- $\delta$ -Glutamate receptor  
proteins binding, EMAP identification as, **291**, 85
- Glutamate receptors  
ionotropic, facilitation of glutamate release in osteoblasts, **297**, 452
- L-Glutamic acid  
activation by fengycin synthetase FenE, **292**, 789
- Glutamic acid decarboxylase  
GAD<sub>67</sub> isoform, glucose-regulated gene transcription in islets of Langerhans, mediation by PDX-1, **295**, 243
- Glutamine  
role of Gln277 residue in thermal inactivation of protective antigen of *Bacillus anthracis*, **296**, 1058
- Glutamine synthetase  
glucocorticoid-induced expression in hepatoma cells, **296**, 1026
- $\gamma$ -Glutamylcysteine synthetase  
gene expression in human colon cancer cells, induction by NSAIDs, **290**, 1427  
induction by N<sup>ε</sup>-(carboxymethyl)lysine in RAW264.7 cells, **296**, 32
- Glutaraldehyde  
and dimethyl adipimidate, cross-linkage with, for preparation of bovine polyhemoglobin, **293**, 958
- Glutaredoxin  
catalysis of glutathione reduction by dihydrolipoamide, **295**, 1046  
GSH-dependent peroxidase activity (rice), **296**, 1152
- Glutathione  
GSH and GSSG, chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192  
and mechanism of hemozoin synthesis by malaria parasite, **290**, 595  
metabolism, *CT120* gene involved in, molecular cloning and characterization, **297**, 528  
recycling in cellular defense against UVB-induced phototoxicity, role of cytosolic NADP<sup>+</sup>-dependent isocitrate dehydrogenase, **292**, 542  
reduced, content in erythrocytes from NIDD patients and effects of N-acetylcysteine, **290**, 1393  
reduction by dihydrolipoamide, catalysis by glutaredoxins, **295**, 1046  
role in MRP1-mediated detoxification of sodium arsenite and antimony in vitro, **291**, 617
- Glutathione-dependent peroxidase  
associated activity of rice glutaredoxin, **296**, 1152



- Glutathione peroxidase  
chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192  
skeletal muscle, inhibition by reactive nitrogen species donors, specificity, **294**, 1093
- Glutathione *S*-transferase  
chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192
- Glutathionylation  
regulation of protein phosphatase 2A, **293**, 610
- N*-Glycans  
from human neutrophil azurocidin, structural analysis, **293**, 213
- Glycated albumin  
cytotoxicity to retinal pericytes, effects of antioxidants (bovine), **292**, 1010
- Glycemia  
control with targeted disruption of glucagon receptor gene (mouse), **290**, 839
- D-Glyceraldehyde  
inhibition of mitochondrial permeability transition in isolated liver mitochondria, **291**, 215; *erratum*, **292**, 787
- Glyceraldehyde 3-phosphate dehydrogenase  
interaction with cytoplasmic domain of macrophage scavenger receptors, **290**, 858
- Glycerol  
effects on  $\alpha$ -chymotrypsin structure and activity, **293**, 416  
lowering of oxygenase activity of Rubisco, **298**, 247
- Glycerophosphate acyltransferase  
liver mitochondrial, stimulation by casein kinase II (rat), **296**, 1091
- Glycine  
Gly38 role in ribonucleolytic activity of human pancreatic ribonuclease on double-stranded RNA, **297**, 390
- Glycine-rich RNA-binding protein  
*Sorghum bicolor*, mRNA, salinity- and ABA-induced upregulation and modulation by light, **296**, 1063
- Glycogen  
content in skeletal muscle, inverse relationship to phosphorylase *a* activity (mouse), **290**, 874
- Glycogenolysis  
in muscle during prolonged exercise (human), **298**, 309
- Glycogen synthase kinase-3  
inhibition by lithium and beryllium: two magnesium-binding sites, **290**, 967  
role in phosphorylation of  $\beta$ -catenin at GSK-3 priming site Ser45, **294**, 324
- Glycogen synthase kinase-3 $\beta$   
inhibition by bivalent zinc ions, **295**, 102  
phosphorylation at serine-9 by serum and glucocorticoid-inducible kinase-like kinase through direct interaction, **293**, 1191
- Glycolate  
transport by L-lactate permease and glycolate permease (*Escherichia coli*), **290**, 824
- Glycolate permease  
transport of L-lactate, D-lactate, and glycolate (*Escherichia coli*), **290**, 824
- Glycoprotein 130  
IL-6/gp130/STAT-3 signaling pathway, PGE<sub>2</sub> stimulation of prostatic intraepithelial neoplasia cell growth via, **290**, 249
- Glycoprotein B  
nucleoplasmic tail, of HSV-1, three-residue signal for protein localization to inner nuclear membrane, **291**, 966
- Glycoproteins  
O-glycosylated, human, interactions with galactose-binding lectin from champedak, **295**, 1007  
pestivirus envelope, folding and assembly, role of disulfide bond formation, **296**, 470
- Glycosaminoglycan chains  
in decorin, reconstruction, **297**, 1167  
enzymatic attachment to peptide, carriers for, **293**, 220  
purified, inhibitory effects on hydroxyapatite crystal growth, **292**, 727
- Glycosaminoglycans  
purified GAG chains and core proteins, inhibition of hydroxyapatite crystal growth, **292**, 727  
from wild-type *Caenorhabditis elegans*, isolation and characterization, **293**, 1374
- Glycosphingolipids  
modulation of apolipoprotein E levels in macrophages and cholesterol-loaded foam cells, **290**, 1361
- Glycosylation  
 $\beta_1$ -adrenergic receptors: regulation of receptor surface expression and dimerization, **297**, 565
- N-Glycosylation  
brefeldin A-induced, prosomatostatin in AtT20 cells, **296**, 618
- O-Glycosylation  
by *N*-acetylgalactosaminyltransferase 1, role of lectin domain tandem repeat sequences, **298**, 755  
interference by alloxan, **293**, 207  
RFP, role in interaction with Enhancer of Polycomb 1, **290**, 409
- Glycosylphosphatidylinositol anchor  
green fluorescent protein with, Ca<sup>2+</sup> signaling and homogeneous distribution on cell surface, **293**, 714
- Glycosylphosphatidylinositol-anchored protein  
GPI-80, physical association of  $\beta$ 2 integrin with, **294**, 692
- Glycosyltransferase  
acetan-biosynthesis-related, gene cloning (*Acetobacter xylinum*), **295**, 230
- GODZ  
Golgi-specific, with DHHC zinc finger domain, isolation and characterization, **296**, 492
- Gold colloids  
functionalized, for single particle tracking experiments, **295**, 610  
nanoparticles, surface modification by, enhancement of DNA sensor sensitivity, **295**, 14
- Golgi apparatus  
dynamin 2 localization at, in Sertoli cells, **294**, 261  
GODZ specific to, with DHHC zinc finger domain, isolation and characterization, **296**, 492  
nucleation, mediation by centrosome via interactions with Golgi-resident proteins, **291**, 494  
vacuole membrane protein 1 localization (rat), **290**, 641
- Golgin-97  
interactions with centrosome, role in nucleation of Golgi apparatus, **291**, 494
- Gonadotropin-releasing hormone  
stimulation of annexin 5 mRNA expression in anterior pituitary cells, **291**, 915
- Gonadotropin-releasing hormone-like peptide  
isolation and characterization (*Octopus vulgaris*), **291**, 1187
- Gonadotropin-releasing hormone receptor type II  
*GnRH-R* gene for, conserved physical linkage with *RBM8* in medaka and human genomes, **293**, 327
- Gonads  
*DAX1* and *SHP* expression in Nile tilapia, **297**, 632
- GPIb $\alpha$   
recombinant, conjugated phospholipid vesicles with different flexibilities, rolling on vWF surface, **296**, 765
- gp41  
HIV-1, leucine zipper domain, interaction with  $\alpha$ -catenin, **291**, 1239
- gp120  
activation by V3 loop-derived peptides, **297**, 625  
C4 domain, insertion into adenovirus type 2 fiber globular region, **296**, 897



- 2'F-RNA aptamer binding to, structural characterization, **293**, 924  
utilization by immunoglobulin domain 1, role of CD4 hinge region, **292**, 449
- gp130  
stimulation, effect on glutamate excitotoxicity in primary hippocampal neurons, **295**, 532
- GPI-anchor  
mouse acetylcholinesterase with, cell surface expression in *Klpmr1Δ* cells of *Kluyveromyces lactis*, **298**, 559
- G-protein-coupled receptor  
alternate mechanisms in, evidence from mutagenesis and peptide analysis of DRY motif in  $\alpha 2A$  adrenergic receptor, **293**, 1233  
characterization of short neuropeptide F receptor from *Drosophila melanogaster*, **297**, 1140  
*Drosophila* sulfakinin receptor DSK-R1, cloning and functional expression, **291**, 313  
Homer/vesl-mediated clustering, analysis with chimeric ET<sub>B</sub>R/mGluR, **295**, 756  
for melanin-concentrating hormone, in human neuroblastoma Kelly cells, **298**, 54  
membrane-type, for bile acids, identification, **298**, 714  
*rgpr85* encoding, cloning and localization (rat), **298**, 613  
7-helix transmembrane, expressed in pulmonary epithelial cells and induced by hypoxia, genomic organization and regulation (human), **291**, 1160  
ZAQ and 15E orphan receptors, EG-VEGF/prokineticins identification as cognate ligands of, **293**, 396
- G-protein-coupled receptor agonists  
Pyk2 phosphorylation in endothelium stimulated by, role of intracellular Ca<sup>2+</sup>, PKC, and Src kinases, **294**, 1001  
stimulation of hepatocyte growth, role of MAP kinases, **291**, 588
- G-protein-gated inwardly rectifying K<sup>+</sup> channel 2  
mRNAs with AU-rich elements, brain-specific expression, **291**, 1265
- G proteins  
activation of angiotensin II receptor type 1A, role of DRY motif, **292**, 362  
coupling to vasoactive intestinal peptide receptor VPAC<sub>1</sub>, identification, **290**, 1300; *erratum*, **293**, 1580  
endomorphin 2 binding to, effects of side chain modifications in endomorphin 2, **290**, 153  
G $\alpha_h$ , modulation of intracellular Ca<sup>2+</sup>, **293**, 383  
G $\alpha_q$ , signaling on  $\alpha$ -adrenoceptor stimulation in neonatal cardiomyocytes, counteraction by G $\beta\gamma$ , **291**, 995  
G $\alpha_s$ , paternal imprinting in human thyroid, role in TSH resistance in pseudohypoparathyroidism type 1a, **296**, 67  
G $\beta\gamma$   
counteraction of G $\alpha_q$  signaling upon  $\alpha$ -adrenoceptor stimulation in neonatal cardiomyocytes, **291**, 995  
increase by receptor-mediated adenylyl cyclase activity by G-coupled EP3 receptor independently of, **290**, 162  
G<sub>i2</sub>  
fusion protein with  $\beta_2$ -adrenoceptor, activation of adenylyl cyclase, **298**, 824  
signal modulation by UNC5H2, **297**, 898  
Gi family, C-terminus as determinant of 5-HT<sub>1A</sub> receptor coupling, **294**, 655  
G<sub>q/11</sub>  
role in Ca<sup>2+</sup> signaling involving *Drosophila melanogaster* sulfakinin receptor DSK-R1, **291**, 313  
role in insulin-stimulated inositol phosphoglycan generation in liver membranes (rat), **295**, 561  
Gs, differential coupling of  $\alpha 1$ -adrenergic receptor subtypes to, key amino acids for, **299**, 142  
PTX-sensitive, activation of extracellular signal-regulated kinases via, **290**, 539  
strain and strain rate activation in endothelial cells (human), **299**, 258  
*Gracilaria tenuistipitata*  
nitrate reductase in, characterization and daily variation, **295**, 50  
Gramicidin D  
effect on cell wall lysis and membrane potential in *Streptomyces griseus*, **290**, 1169  
Granule exocytosis model  
for cytotoxicity, Fas ligand participation in, **296**, 328  
Granules  
specific, of human eosinophils, lysosomal characteristics, **291**, 844  
Granulocyte colony-stimulating factor  
stimulation of angiogenesis and tumor growth, role of bone marrow-derived endothelial progenitor cells (mouse), **297**, 1058  
Granulocyte-macrophage colony-stimulating factor  
secretion, in initiation of immune activation of microglia by glia maturation factor overexpression in astrocytes, **294**, 238  
upregulation of ribosomal p70S6k activity, **293**, 463  
Granulocytes  
highest TT virus load among various leukocyte subpopulations, **290**, 242  
HL-60, deimination of Arg residues of nucleophosmin/B23 and histones in, **290**, 979  
Granulosa cells  
apoptosis induction by TNF- $\alpha$  and attenuation by glucocorticoids, role of modulation of Bcl-2, **294**, 51  
expression of DR5-like death receptor TVB (chicken), **291**, 226  
Grass pollen allergen  
cellulose-binding domain, homology modeling, **296**, 1346  
Grayanotoxin  
action in D1 S4-S5 and D4-S5 intracellular linkers of sodium channel  $\alpha$ -subunits, structural determinants, **295**, 452  
Green fluorescent protein  
expressed in HeLa cells, coding region of, antisense oligonucleotides and siRNAs targeted against, comparison, **296**, 1000  
gene silencing in mammalian cells by preformed small RNA duplexes, **295**, 744  
glycosylphosphatidylinositol-anchored, Ca<sup>2+</sup> signaling and homogeneous distribution on cell surface, **293**, 714  
H2AX labeled with, photobleaching in chromatin, **297**, 1318  
photobleaching inside live cells in two-photon excitation microscopy, **291**, 1272  
y<sup>+</sup>L amino acid transporter-1 tagged with, normal and mutant form expression in mammalian cells, **291**, 1173  
Green fluorescent protein-rat-liver glycogen synthase  
expression in mouse spermatozoa, **297**, 841  
Green tea  
catechin in, elevation of P-glycoprotein function, **297**, 412  
inhibition of  $\beta$ -catenin/Tcf activity, relationship to H<sub>2</sub>O<sub>2</sub> generation, **296**, 584  
Gremlin  
transcriptional activation of p21<sup>Cip1</sup>, mechanism and effect on neoplastic transformation, **295**, 1135  
GRK3  
regulation during CRF- and urocortin-induced CRF<sub>1</sub> receptor desensitization, **298**, 303  
GroEL  
transient interaction with oxidatively inactivated rhodanese, reacting effects of, **294**, 893  
GroESL  
mediation of folding of human liver mitochondrial aldehyde dehydrogenase in *E. coli*, **298**, 216  
Growth  
cellular, *see* Cell growth  
Growth arrest  
induction of murine H-rev107 gene expression, role of Sp1/Sp3-binding GC-box, **294**, 63

## Growth cone proteins

GAP-43, interaction with protein kinase C  $\gamma$ , modulation by palmitoylcarnitine, **294**, 823

## Growth differentiation factor-8

knockout in mice, effects on myogenesis and adipogenesis, **291**, 701  
missense mutant, induction of hyperplasia without hypertrophy in mouse muscle, **293**, 247

## Growth factors

dlk effect on cell growth and interaction with growth-modulating modules in yeast two-hybrid system, **291**, 193  
gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482  
review of bone tissue engineering, **292**, 1  
treatment of chondrocytes, molecular analysis: identification of differentiation markers and growth-related genes (human), **293**, 284

## Growth hormone

effect on adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084  
human, gene encoding, localization of negative vitamin D response sequence in, **292**, 250  
impaired response to, effects of metformin (rat), **291**, 722  
secretion, relationship to diurnal rhythm of ghrelin secretion in scheduled meal-fed sheep, **295**, 255

## Growth hormone binding protein

release from growth hormone receptor by proteolysis, region critical for, identification (human), **290**, 851

## Growth hormone receptor

proteolysis, region critical for, identification (human), **290**, 851

## Growth-related genes

identification by molecular analysis of chondrocyte expansion, differentiation, and growth factor treatment (human), **293**, 284

## GrpE

Hsc62-Hsc56-GrpE as Hsp70 chaperone system in *Escherichia coli*, **293**, 1389

## grpE gene

promoter, interaction with TATA-binding protein, surface plasmon resonance measurement, **298**, 625

GSK3 $\beta$ 

cyclin D1 threonine-286 phosphorylation dependent on, role in proteosomal degradation, **298**, 377

## GSSG reductase

chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192

## GTP

requirement for transglutaminase 2 stabilization and transamidation activity, **294**, 818

## GTPase

endocytically active, regulation of *Trypanosoma cruzi* invasion of nonphagocytic cells, **291**, 516  
Rho-family, and effectors, role in neuritogenesis, **294**, 923  
*Streptococcus pneumoniae* Ffh with homology to SRP54 subunit of mammalian signal recognition particle, **292**, 601

## GTPase activating proteins

potentially cytoskeletal Rho-GAP, human gene ARHGAP10 coding for, **294**, 579

## GTP-binding proteins

activation, requirement for pleckstrin retention in permeabilized platelets, **293**, 640  
Ras-like small, Rin, activation by growth factor stimulation, **295**, 651

## GTP cyclohydrolase I

expression in PC12D cells, enhancement by V-1 overexpression, **293**, 962

## Guanine nucleotide exchange factors

associated activity of alternative splicing variants of human *DBL* (*MCF-2*) proto-oncogene, **299**, 455  
BIG2, dominant-negative mutant of, effects on membrane trafficking from *trans*-Golgi network, **294**, 254

Rho-specific, containing PDZ domain, interaction with plexin-B1, **297**, 32

## Guanine nucleotides

binding and hydrolysis by Cdc42, kinetics, effects of  $Mg^{2+}$ , **297**, 653  
Guanosine 5'-*O*-(3-thiotriphosphate)  
[ $^{35}S$ ]GTP $\gamma$ S binding in Hcrt $\gamma$  2-transfected cell lines and in brain homogenates, stimulation by hypocretin, **294**, 615

## Guanylyl cyclase

membrane-bound, activation in coronary arterial smooth muscle by resveratrol, **291**, 1218  
nitric oxide-sensitive,  $\alpha_1/\beta_1$  and  $\alpha_2/\beta_1$  isoforms, activation by BAY 41-2272, **292**, 1057

## Guanylyltransferase

activity of mammalian reovirus mRNA capping enzyme, mutational analysis, **291**, 932

## Gurken

TGF- $\alpha$ -like, direct binding to *Drosophila* EGF-receptor homolog Egfr, **291**, 731

## Gut endoderm

organ development from, role of OC-3, **292**, 848

## H

## H2AX

GFP-labeled, photobleaching in chromatin, **297**, 1318

## HAC1

identification as high-copy suppressor of *sec24-20* mutant defective in COPII vesicle formation from ER, **296**, 568

*Haemophilus influenzae* strain Rd

$\beta$ 1,3-*N*-acetylgalactosaminyltransferase LgtD from, overexpression and characterization, **295**, 1

## Hair cuticle

cysteine-rich calcium-binding S100A3 protein from, characterization (human), **299**, 857

## Hair follicle

dermal papilla cells, IFN- $\beta$  from, inhibition of outer root sheath cell growth in vitro, **290**, 1133  
epithelium-derived components, Bmp4 expression in, promoter control modules directing, **293**, 1412  
prostaglandin  $E_2$  receptor subtype expression (mouse), **290**, 696

## Hair growth

inhibition by fibroblast growth factor 5 by blocking of dermal papilla cell activation, **290**, 169

## Halothane

liver injury induced by, role of macrophage migration inhibitory factor, **294**, 225

## Hammerhead ribozyme

linear, activity and stability, comparison to circular RNA-DNA enzyme obtained by in vitro selection, **292**, 1111

## HAND1

expression in adult heart and modulation during cardiac hypertrophy (mouse), **297**, 870

## HAND2

expression in adult heart and modulation during cardiac hypertrophy (mouse), **297**, 870

## Hantaan virus

monoclonal antibodies to, in vitro and in vivo protective activity, **298**, 552

## HAP4

regulation of *GDH1* expression under respiratory growth, **293**, 79

## Haptoglobin

gene expression activated by all-*trans*-retinoic acid, role of CCAAT/enhancer-binding protein  $\alpha$ , **294**, 956

## HARE

identification as endocytic hyaluronan receptor in liver endothelial cells, **294**, 918



- HB-EGF, *see* Heparin-binding epidermal growth factor
- HBx  
gene expression, upregulation by Adriamycin at posttranscriptional level, **296**, 1157
- hda-7*  
encoding class II histone deacetylase CεHDA-7 interacting with MEF-2 (*Caenorhabditis elegans*), **293**, 1295
- HDAC1  
multiprotein complex with Sp1 and Sp3, alteration by trichostatin A, **296**, 1005
- HDAC9* gene  
chromosomal organization and localization, **293**, 182
- Head group  
effect on solubility of amphiphiles in membranes, **296**, 596
- Head and neck cancer  
antigens, recognized by humoral immune system, **294**, 734  
squamous cell, correlation of nitric oxide and cyclooxygenase-2 pathways in, **299**, 517
- Hearing  
role of aquaporin 4 expression (mouse), **297**, 987
- Hearing loss, *see also* Deafness  
connexin 30 mutations associated with, functional studies (human), **298**, 651  
frequency and functional studies of common connexin26 alleles in, **296**, 685
- Heart  
anaphylactic response, modulation by plant histaminase (guinea pig), **296**, 840  
atrium, identification of peptide amidicin with C-terminal amide structure (pig), **293**, 741  
chloride channels: tefluthrin modulation of anionic background conductance  $I_{AB}$  in guinea pig ventricular myocytes, **292**, 208  
*Clock* mutant mice on Jcl:ICR background, entrainable expression of *mPer2* and *BMAL1* mRNA, **298**, 198  
congenital disease, Down syndrome and chimeric mice with, reduction in *mcl-2a* expression by extra human chromosome 21, **295**, 112  
development, role of *ZNF359* and *ZFP28* genes (human), **295**, 862  
fatty acid metabolism, role of remnant lipoprotein particle uptake into myocardium via VLDL receptor, **293**, 1007  
gene expression profile, effects of chronic nicotine consumption (rat), **297**, 729  
heat shock response, inhibition by hyperlipidemia induced by high-cholesterol diet (rat), **290**, 1535  
Homer1d from, controlling trafficking of group I metabotropic glutamate receptor in HEK293T cells, N-terminal sequence specific for, **296**, 523  
hypertrophy  
*HAND1* and *HAND2* modulation during, in mouse, **297**, 870  
role of cyclin D1 and CDK4, **296**, 274  
*KCNQ1* truncated splice variant, cloning (rat), **294**, 199  
Krüppel-like zinc-finger gene *ZNF382* expression (human), **299**, 606  
L-type calcium channel  
β-subunit sequestration (mouse), **293**, 1405  
Ca<sub>v</sub>1.2 α<sub>1C</sub> subunit, promoter for, **296**, 429  
neurexin 3 mRNA splicing specific to, variant identification and characterization, **298**, 151  
perfused, expression of thioesterase specific for very-long-chain fatty acids, control by β-adrenergic stimulation, **299**, 135  
protective effects of proteasome inhibitors, **291**, 542  
remodeling after myocardial infarction, role of heparin-binding epidermal growth factor-like growth factor, **297**, 375  
ryanodine receptor, critical regulatory domain, peptide probe study, **291**, 1102  
sarcoplasmic reticulum Ca<sup>2+</sup>-calmodulin protein kinase activity, inhibition by Ca<sup>2+</sup> overload, **293**, 727
- Heart failure  
chronic, associated increase in myocardial RAMP1 and RAMP3 expression (rat), **294**, 340  
endothelin-converting enzyme-1 upregulation in, prevention by angiotensin-converting enzyme inhibitor therapy (human), **295**, 1057  
role of cardiac ankyrin repeat protein augmentation (human), **293**, 1377  
upregulation of ECV304 cell proliferation-stimulating gene IC53 in, **294**, 161
- Heat shock  
continuous, enhancement of translational initiation directed by internal ribosomal entry site, **297**, 224  
inhibition of NF-κB in absence of heat shock factor-1, **291**, 453  
intercellular trafficking of herpes simplex virus type 2 UL14 deletion mutant proteins after, **298**, 357  
survival of bovine preimplantation embryos after, apoptosis as adaptive response facilitating, **295**, 37
- Heat shock factor 1  
and NF-IL6, mutual antagonistic effects on transcription in monocytic cells, **291**, 1071  
NF-κB inhibition by heat shock in absence of, **291**, 453
- Heat shock protein 40  
promoter, interaction with TATA-binding protein, surface plasmon resonance measurement, **298**, 625
- Heat shock protein 60  
elicitation of abnormal response in macrophages of diabetes-prone non-obese diabetic mice, **294**, 592
- Heat shock protein 70  
expression in rat heart in response to heat stress and ischemia, effect of hyperlipidemia due to high-cholesterol diet, **290**, 1535  
interaction with cytoplasmic domain of macrophage scavenger receptors, **290**, 858  
promoter, interaction with TATA-binding protein, surface plasmon resonance measurement, **298**, 625  
synthesis in breast cancer cells, effect of HSF1 inhibition by dominant-negative mutant, **290**, 1454
- Heat shock protein 72  
gene expression in human skeletal muscle, activation by IL-6, **296**, 1264
- Heat shock protein 90  
complexes in resting and thrombin-activated platelets, **297**, 129  
interaction with cytoplasmic domain of macrophage scavenger receptors, **290**, 858
- Heat shock proteins  
differential response in cardiomyocytes, induction by inhibition of ubiquitin-proteasome pathway, **291**, 542  
expression after acetaminophen treatment in MIF<sup>-/-</sup> mice, **294**, 225  
small, cyanobacterial, imperfect inverted repeat in gene for, specific binding of protein to, **297**, 616
- Heat shock response  
and C/EBP-β and -δ activation by proteasome inhibitors in human intestinal epithelial cells, **290**, 469  
in heart, inhibition by hyperlipidemia induced by high-cholesterol diet (rat), **290**, 1535  
inhibition of IL-18 expression through JNK pathway in murine peritoneal macrophages, **296**, 742
- Heat shock transcription factor 1  
blocking by dominant-negative mutant, effect on tumor cell HSP70 synthesis and sensitivity to hyperthermia, **290**, 1454
- Heat stress  
p59<sup>scr</sup> mRNA sensitivity to, **292**, 992
- Heavy metal oxyanions  
protection from, role of multidrug resistance protein 1, studies in vitro and in MRP1-deficient mice, **291**, 617



## Heavy metals

*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653

## HECT domain

ubiquitin–protein ligase E3A, interaction of VCY2 protein with, **296**, 1104

Hedamycin:d(ACCGGT)<sub>2</sub> complex

structural analysis by NMR and restrained molecular dynamics, **290**, 1602

## HeLa cells

## apoptosis

cytochrome *c* release during, detection of Ca<sup>2+</sup> signal upstream of, **299**, 762

earlier onset induced by p38 $\alpha$  splice variant Ekip, **291**, 838

pierisin-1-induced, effect of Bcl-2, **296**, 20

staurosporine-induced, pro-apoptotic effect of CDK inhibitor p57<sup>Kip2</sup>, **296**, 702

TRAIL-induced, IFN- $\gamma$  enhancement of, role of inhibition of TRAIL-induced IAP-2 upregulation, **291**, 233

GFP expressed in, coding region of, antisense oligonucleotides and siRNAs targeted against, comparison, **296**, 1000

lethal effect of expression of connexin31 mutation causing erythro-keratoderma variabilis, **296**, 721

mitochondrial DNA-depleted, hypoxic induction of HIF-1 $\alpha$  and oxygen-regulated gene expression in, **297**, 346

paraquat sensitivity, effects of VDUP1 mRNA overexpression, **293**, 293

Rab11 positive compartment, condensation by Rab11-FIP4 overexpression, **299**, 770

Helicase, *see* DNA helicase*Helicobacter pylori*

activation of protooncogene *c-fos* through serum response element transactivation, **291**, 868

EGF receptor transactivation stimulated by, role of metalloprotease cleavage of HB-EGF, **295**, 695

induced VacA toxin internalization in human gastric epithelial cells, effect of acidic extracellular pH, **292**, 167

lipopolysaccharide, disruption of gastric mucin synthesis, role of ERK and p38 MAP kinase, **294**, 220

ribosomal protein L1, N-terminal peptide HP (2–20), antifungal mechanism against *Candida albicans*, **291**, 1006

## Helper virus

adenoviral transfer of BMP-2 dependent on, enhancement of bone repair with, **297**, 523

## Hemalbumin

atomic structure of human methemalbumin at 1.9 Å, **291**, 813

 $\beta$ -Hematin

propionic acid side chain hydrogen bonding in, **294**, 132

synthesis by malaria parasite, physicochemical mechanism, **290**, 595

## Hematopoietic cells

regulation of cytokine-inducible protein CIP29 in, **292**, 593

## Hematopoietic stem cells

in umbilical cord blood, TIE2 function in, analysis (human), **298**, 731

## Heme

interaction with small unilamellar lipid vesicles of uniform size, **296**, 1352

phosphodiesterase regulated by, binding of cyanide, effect of Met95 mutations (*Escherichia coli*), **299**, 169

propionate groups, esterification of, promotion of  $\alpha/\beta$  hemoglobin chain homogeneity of CN–hemin binding, **293**, 1354

## Heme oxygenase

gene expression profile in liver during bacteria-induced fulminant hepatitis, analysis by cDNA microarray system, **298**, 675

gene expression in U937 cells, augmentation by ultrasound, **290**, 498

## Heme oxygenase-1

differential effect in endothelial and smooth muscle cell cycle progression, **296**, 1077

gene encoding, role in endothelial cell cycle progression, **291**, 68

induction, role in antioxidant effects of pentaerythrityl trinitrate, **290**, 1539

reduced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635

## Hemin

CN–hemin binding,  $\alpha/\beta$  hemoglobin chain homogeneity of, promotion by propionate group esterification, **293**, 1354

## Hemodynamics

effects of exogenous adrenomedullin in healthy and endotoxemic sheep, **296**, 134

## Hemoglobin

$\alpha/\beta$  chain homogeneity of CN–hemin binding, promotion by esterification of propionate groups, **293**, 1354

CO affinity for, increase at low oxygen fractions, **295**, 975

equilibrium analysis by multiangle laser light-scattering method, **290**, 1382

HbA of tufted duck, structural analysis:  $\alpha 99$ Arg role in formation of complex salt bridge network, **291**, 176

Hb Zurich-Hottingen variant, detection by electrospray ionization mass spectrometry, **292**, 1044

instability in model mice for Presbyterian hemoglobinopathy, **295**, 869

interaction of HbCO and heme with small unilamellar lipid vesicles of uniform size, **296**, 1352

R-state, binding of NO, kinetics, **292**, 812

truncated, from *Mycobacterium leprae*, **294**, 1064

visible region MCD and MLD spectra of nitrosylferrohemoglobin and oxyhemoglobin, **297**, 220

## Hemoglobinopathy

Presbyterian, model mice for, hemolytic anemia with altered oxygen affinity and Hb instability in, **295**, 869

## Hemolymph

silkworm, inhibition of apoptosis in Sf9 cells, **295**, 779

## Hemolysis

activity of pore-forming peptide clonarin, **296**, 1238

fish erythrocytes by *Vibrio mimicus* phospholipase A, **298**, 269

by linear peptides from scorpion, **293**, 1514

by proteinaceous toxins from nematocyst venom of Okinawan sea anemone, **294**, 760

## Hemolytic anemia

in model mice for Presbyterian hemoglobinopathy, **295**, 869

## Hemolytic factor

from *Loxosceles laeta* venom, molecular cloning and expression, **298**, 638

## Hemozoin

propionic acid side chain hydrogen bonding in, **294**, 132

synthesis by malaria parasite, physicochemical mechanism, **290**, 595

## Heparan sulfate

and heparin, minimal sequences for binding to fibroblast growth factor-1, **292**, 222

synthesis, effect of transgenic EXT gene expression in developing chondrocytes (mouse), **292**, 999

## Heparan sulfate 3-O-sulfotransferase-1

enzymatic function, structural motifs and amino acids mediating, identification (human), **290**, 1214

expression in *Escherichia coli*, purification, and kinetic characterization (human), **290**, 1206

## Heparin

complex with poly-L-lysine, stimulation of angiogenesis in chick embryo chorioallantoic membrane, **290**, 820

and heparan sulfate, minimal sequences for binding to fibroblast growth factor-1, **292**, 222

## Heparin-binding domain

as NLS for nuclear translocation of extracellular superoxide dismutase, **296**, 54

- Heparin-binding epidermal growth factor  
 metalloprotease cleavage, role in *Helicobacter pylori*-stimulated EGF receptor transactivation, **295**, 695  
 plasma, increase associated with obesity and coronary artery disease, **292**, 781; *erratum*, **295**, 571  
 regulation of *pdx1* gene promoter in pancreatic beta cells, **299**, 277  
 role in cardiac remodeling after myocardial infarction, **297**, 375
- Heparin/heparan sulfate  
 minimal sequences for binding to fibroblast growth factor-1, **292**, 222
- Hepatectomy  
 partial, 90% or 70%, effect on hepatic mRNA profiles, **290**, 518
- Hepatic stellate cells  
 activation, inhibition by pioglitazone, **291**, 55  
 $\alpha$ -smooth muscle actin expression, inhibition by selective COX-2 inhibitor NS-398 (L190), **297**, 1128  
 coculture with liver epithelial cells, induction of hepatocyte formation, **293**, 1420  
 hepatocyte growth factor secretion, stimulation by leucine, **297**, 1108  
 protein synthesis, RNA strands in, stabilization by type I procollagen C-proteinase enhancer protein, **290**, 898  
 transdifferentiation of, TGF- $\beta$  isoform mRNA expression during, quantitative monitoring, **295**, 330; *erratum*, **296**, 1035
- Hepatitis  
 fulminant, bacteria-induced, associated gene expression profile in liver, analysis by cDNA microarray system, **298**, 675
- Hepatitis B surface antigen  
 interference with LPS-induced activation of ERK1/2 and JNK1/2 in monocytes, **297**, 486
- Hepatitis B virus  
 closed circular DNA, quantitation by real-time PCR, **295**, 1102
- Hepatitis B virus X protein  
 gene expression, upregulation by Adriamycin at posttranscriptional level, **296**, 1157
- Hepatitis C virus  
 cell line infected with, subgenomic replicon derived from, generation, **293**, 993  
 core protein  
 expressed in *Pichia pastoris*, processing, **295**, 81  
 expression efficiency in *E. coli*, effect of use of tRNA<sub>AGA/AGG</sub>, **296**, 1303  
 innate form, role in core protein localization and function, **294**, 521  
 subcellular localization, regulation of ability for p53 activation and p21 suppression, **294**, 528
- C-terminally truncated RNA-dependent RNA polymerase, kinetic analysis, **290**, 1188; *erratum*, **296**, 227
- genome, domains I and II in 5' nontranslated region, role in RNA replication, **290**, 105
- internal ribosomal entry site-dependent translation, enhancement by continuous heat stress, **297**, 224
- in vitro self-assembled core virus-like particles, induction of strong antibody response in sheep, **290**, 300
- NS4B protein, physical interaction with CREB-RP/ATF6 $\beta$ , **299**, 366
- NS5B protein, association with human eukaryotic initiation factor 4AII in vitro, **292**, 659
- polypyrimidine tract, internal initiation sites of de novo RNA synthesis in, **295**, 682
- Hepatocarcinogenesis-related transcription factor  
 human XBP/TREBP5-related, activated by hepatocellular carcinoma in rats: HTF, **223**, 746; *erratum*, **297**, 425
- Hepatocarcinoma cells  
 HepG2, *see* HepG2 cells
- Hepatocellular carcinoma  
 chromosome 17p13.3 loss of heterozygosity region deleted in, *CT120* gene isolation from, **297**, 528  
 proteome analysis (human), **291**, 1031
- therapeutic effect of polyethylenimine-mediated suicide gene transfer in vivo, **291**, 48
- XBP/TREBP5-related transcription factor HTF activated in rats by, **223**, 746; *erratum*, **297**, 425
- Hepatocellular carcinoma cells  
 arsenic trioxide-induced apoptosis and enhancement by buthionine sulfoximine, **291**, 861  
 growth inhibitory effects of TGF- $\beta$ , attenuation by cyclin D1 overexpression, **292**, 383
- Hepatocyte growth factor  
 biologically active, production, augmentation of liver regeneration by HGF activator via, **290**, 475  
 expression in spleen, induction by skeletal muscle injury, **292**, 709  
 gene regulation mediated by multiconsensus region, role of USF, **296**, 374  
 hepatocyte proliferation mediated by, integral role of epidermal growth factor receptor, **290**, 197  
 induction of ectodomain shedding of nectin-1 $\alpha$  in MDCK cells, **299**, 472  
 secretion by hepatic stellate cells, stimulation by leucine, **297**, 1108  
 and TGF- $\beta$ 1, coordinate facilitation of collagen turnover in subepithelial mesenchyme, **297**, 255  
 triggering of signal cascades mediating vascular smooth muscle cell migration, **298**, 80  
 upregulation of thymosin  $\beta$ 4 in human umbilical vein endothelial cells, **296**, 401
- Hepatocyte growth factor activator  
 exogenous, augmentation of liver regeneration via production of biologically active HGF, **290**, 475  
 inhibition by mouse HGF activator inhibitor type 2 lacking first Kunitz domain, **290**, 1096
- Hepatocyte growth factor activator inhibitor type 2  
 lacking first Kunitz domain, inhibition of HGF activator (mouse), **290**, 1096
- Hepatocyte nuclear factor 4 $\alpha$   
 SHP interaction with in living cells with, and nuclear translocation of SHP, **292**, 8
- Hepatocytes  
 analysis of enhancer elements for constitutive expression of mouse *Cyp1a2* gene, **297**, 1297  
 apoA-I, hepatic lipase, scavenger receptor B1, and ABCA1 gene expression, effect of testosterone, **296**, 1051  
 basolateral surface, ABCA1 transporter function, **297**, 974  
 bilirubin conjugation, induction in primary culture (rat), **291**, 29  
 bone marrow-derived, induction of, culture conditions enhancing, **298**, 24  
 fibronectin gene expression, activation by NF- $\kappa$ B (rat), **297**, 1218; *erratum*, **299**, 167  
 formation by liver epithelial cell differentiation induced by coculture with hepatic stellate cells, **293**, 1420  
 D-galactosamine-induced injury, protective effect of L-alanine, mechanisms of, **291**, 738  
 growth, stimulation by EGF and G-protein-coupled receptor agonists, role of MAP kinases, **291**, 588  
 hepatocyte growth factor-mediated proliferation, integral role of epidermal growth factor receptor, **290**, 197  
 immortal, derived from transgenic mouse lines, establishment and characterization, **294**, 864  
 microcystin-induced apoptosis, calpain activation after mitochondrial permeability transition (rat), **291**, 321  
 mitochondrial ornithine/citrulline transporter mRNA, hormonal induction, **294**, 749  
 protective effect of fructose, role of D-glyceraldehyde inhibition of mitochondrial permeability transition, **291**, 215; *erratum*, **292**, 787  
 sinusoidal, fibronectin promoter occupation and function, **295**, 1077  
 SREBP-1c promoter regulation (rat), **290**, 256



- STAT1 suppression, role of nuclear phosphatase and proteasome, **299**, 574
- transdifferentiation of pancreatic islet cells into, induction by transgenic expression of FGF8 and FGF10, **292**, 138
- Hepatoma
- and peritonitis carcinomatosis, suicide gene therapy by vector of replicative-deficient herpes simplex virus, **291**, 855
- Hepatoma cells
- glutamine synthetase expression, induction by glucocorticoids, **296**, 1026
  - growth arrest and phosphoenolpyruvate carboxykinase expression (H4IIEC3 cells), **290**, 1513
  - high levels of RAE-1 isoforms assessed by anti-“pan” RAE-1 antibody, and NK susceptibility (G-1 and G-5 cells), **290**, 140
  - hSR-BI-promoter activity, induction by oxysterol-activated LXR $\alpha$ /RXR, **299**, 916
  - IGFBP-3 promoter activation by trichostatin A via upregulation of Sp1, **296**, 1005
  - interferon- $\alpha$ -mediated antiviral gene induction, role of IL-1 $\beta$  and IL-10 (human), **294**, 414
  - Musashi1 gene expression (human), **293**, 150
  - phenobarbital induction of cytochromes P450, relationship to cholesterol levels (chicken LMH cells), **291**, 378
- HepG2 cells
- apolipoprotein M expression, effects of platelet-activating factor, tumor necrosis factor, and interleukin-1 $\alpha$ , **292**, 944
  - cholesterol metabolism in, effect of Cu,Zn superoxide dismutase, **295**, 603
- Herbicide resistance
- acetolactate synthase from tobacco, role of lysine residues 219 and 255, **293**, 433
- Herpes simplex virus
- replicative-deficient, vector of, suicide gene therapy of hepatoma and peritonitis carcinomatosis by, **291**, 855
- Herpes simplex virus type 1
- nucleoplasmic tail of gB, nuclear localization signal for inner nuclear membrane, **291**, 966
- Herpes simplex virus type 2
- UL14 deletion mutant proteins, intercellular trafficking, **298**, 357
- Herpetomonas muscarum*
- casein kinase 2, activation by platelet-activating factor, **293**, 1358
- Hes-1
- transcriptional activation of acid  $\alpha$ -glucosidase gene in fibroblasts (human), **291**, 582
- HES1* promoter
- transcriptional activity of truncated Notch1, -2, and -3 receptors for, **291**, 775
- HES5* promoter
- transcriptional activity of truncated Notch1, -2, and -3 receptors for, **291**, 775
- Heterochromatin
- silencing in fission yeast, role of Hrp3, **295**, 970
- Heterochromatin protein 1
- Drosophila*, gene regulation by human orthologs of, **293**, 1217
- Heterocyclic amines
- editorial: food-borne carcinogens, **296**, 1037
- Heterogeneous nuclear ribonucleoproteins
- association with nuclear aggregates formed by expression of expanded polyglutamine, **294**, 429
- Heteronomous positioning
- transmembrane segments in multispinning membrane protein, **296**, 1
- Hexa-coordinate state
- ferric lignin peroxidase, spectrophotometric analyses with, **297**, 406
- Hexaprenyl diphosphate synthase
- product specificity change by introduction of mimetic mutations (*Sulfolobus solfataricus*), **297**, 1097
- Hic-5
- transcriptional activation of c-fos, **299**, 360
- Hidden Markov model
- human secretory signal peptide description and generation by, **294**, 835
- Hidrotic ectodermal dysplasia
- connexin 30 mutations associated with, functional studies (human), **298**, 651
- HIF-1 $\alpha$ -prolyl hydroxylase
- direct activation by nitric oxide, **295**, 657
- High-density lipoprotein
- apolipoprotein-mediated lipid efflux from cells, **291**, 727
  - effect of paraoxonase 1 overexpression (mouse), **290**, 921
  - Japanese patients deficient in, ATP-binding cassette transporter-1 mutations in, expression and functional analyses, **290**, 713
  - levels in mice, effect of secretory phospholipase A<sub>2</sub> deficiency, **294**, 88
- Highly unsaturated fatty acids
- $\Delta^6$  desaturase suppression by, mediation by E-box-like sterol regulatory element, **296**, 111
  - in liver, changes after induction of synthetic pathway, **299**, 832
- High-mannose sugars
- binding to domain-swapped dimeric form of cyanovirin-N in solution, **298**, 598
- High mobility group Box protein 1
- and histone H1, differential enhancement of DNA ligation reactions, **292**, 268
- High-performance liquid chromatography
- with high-resolution ICP-MS, binding patterns of V(III), V(IV), and V(V) to human serum transferrin, **296**, 1207
  - simultaneous detection of thiamine and its phosphate esters in microalgae, **291**, 344
- High-resolution inductively coupled plasma-mass spectrometry
- with HPLC, binding patterns of V(III), V(IV), and V(V) to human serum transferrin, **296**, 1207
- Hippocampal cell lines
- immortalized, transcriptional regulation of MARCKS promoter in, **292**, 969
- Hippocampal neurons
- activity, enhancement by L-trans-PDC via stimulation of glial glutamate release, **295**, 376
  - AMPA-induced [Ca<sup>2+</sup>]<sub>i</sub> increase in vitro, attenuation by (-)-epigallocatechin gallate (rat), **290**, 1506
  - AP1 complex expression in vitro, effect of static magnetic field (rat), **292**, 200
  - Ca<sup>2+</sup> channels in, acute effects of A $\beta$ (25–35) and A $\beta$ (1–40), **296**, 1317
  - glutamate excitotoxicity, effect of gp130 stimulation, **295**, 532
  - reciprocal actions of NCAM and tPA via Ras-dependent MAPK activation (rat), **298**, 262
- Hippocampus
- delayed damage, and limbic seizures, triggering by abnormal expression of neuronal nitric oxide synthase (rat), **291**, 255
  - SNARE/caveolin-1 interaction, ATP dependence, **291**, 1232
- Histaminase
- plant, modulation of cardiac anaphylactic response in guinea pig, **296**, 840
- Histamine
- anaphylactic response in guinea pig, modulation by plant histaminase, **296**, 840
  - endogenous synthesis, role in tumor development in histidine decarboxylase-deficient mice, **297**, 1205
  - endothelial cells stimulated by, Ca<sup>2+</sup> oscillation frequency and NF- $\kappa$ B activity in, regulation by phospholipase D (human), **292**, 325
  - stimulation of RANKL production by osteoblasts, **298**, 240



- Histamine H<sub>1</sub> receptor  
antagonism, effect on orexin-induced arousal response, **290**, 1237
- Histamine H<sub>2</sub> receptor  
mediation of local cytokine expression modulation in mouse experimental tumor model, **297**, 1205
- Histamine-releasing factor  
IgE-dependent, synthesis and secretion, stimulation by dioxin, **290**, 984
- Histidine  
or arginine, substitution of lysine in type I membrane proteins, and protein localization to endoplasmic reticulum, **291**, 751  
His10 of insulin B chain, modification leading to superactive insulin, **290**, 775  
His369 of active site in cd<sub>1</sub> nitrite reductase binding cyanide, role in ligand stabilization, **291**, 1  
His662 role in allosteric behavior of muscle phosphofructokinase (rabbit), **290**, 670
- Histidine decarboxylase  
gene promoter, third gastrin response element in, identification and characterization (human), **297**, 1089  
mice deficient in, tumor development, role of endogenous histamine synthesis, **297**, 1205  
neurons immunoreactive to, direct synaptic connection to orexin-immunoreactive nerve terminals, **290**, 1237
- Histidyl-tRNA synthetase locus  
human bi-directional, genomic organization, transcriptional mapping, and evolutionary implications, **294**, 609
- Histiocytic lymphoma cells  
U937, *see* U937 cells
- Histone deacetylase  
class II, interacting with MEF-2 in *Caenorhabditis elegans*: CeHDA-7, **293**, 1295  
inhibition, effects on macrophage CD9 expression, **294**, 660  
inhibitors of, effects on interleukin-18 gene expression in myeloid cells, **292**, 937  
inhibitor trichostatin A  
activation of IGFBP-3 promoter by upregulation of Sp1 in hepatoma cells, **296**, 1005  
inhibition of gelatinase A expression, **298**, 110
- Histone deacetylase 2  
downregulation of IgM light chain gene promoter activity (chicken), **299**, 263
- Histone deacetylase 9  
gene encoding, chromosomal organization and localization, **293**, 182
- Histone H1  
apparent cell membrane translocation, **291**, 367  
effect on DNA–DNA complex formation by mononucleosomes assembled on DNA fragment containing (GGA/TCC)<sub>n</sub> repeats, **290**, 16  
and HMGB1, differential enhancement of DNA ligation reactions, **292**, 268  
phosphorylation by Nek6 kinase in vitro, **293**, 753
- Histone H2A  
variant H2AX, GFP-labeled, photobleaching in chromatin, **297**, 1318
- Histone H3  
acetylation in variable regions of TCR $\beta$  locus, relationship to gene expression, **298**, 420  
phosphorylation by Nek6 kinase in vitro, **293**, 753
- Histone H4  
identification of nuclear type II [<sup>3</sup>H]estradiol binding sites as, **296**, 1083
- Histones  
acetylation  
effects on transcriptional regulation of manganese superoxide dismutase gene, **295**, 187  
induction of murine H-rev107 gene expression, role of Sp1/Sp3-binding GC-box, **294**, 63  
arginine residues, deimination in HL-60 granulocytes, **290**, 979  
association with nuclear aggregates formed by expression of expanded polyglutamine, **294**, 429  
crosslinking by transglutaminase, **293**, 1453  
deacetylation, silencing of maspin gene in breast cancer, **297**, 125  
sea urchin modulator  $\alpha$ -H2A gene, enhancer binding protein MBF-1 of, identification, **295**, 519
- H<sup>+</sup>K<sup>+</sup>-ATPase  
 $\alpha$  subunit gene expression, mediation by extracellular signal-regulated kinase, **290**, 1289
- HL-60 cells  
and acute promyelocytic leukemia NB4 cells, gene expression in retinoic acid-induced differentiation of, **296**, 1125  
DNA binding by CREB, activation by 50-Hz magnetic field, dependence on Ca<sup>2+</sup>, **296**, 1013  
granulocyte-differentiated, deimination of Arg residues of nucleophosmin/B23 and histones in, **290**, 979  
myelomonocytic differentiation, deoxyribonuclease II gene upregulation during, **296**, 48  
pRb/E2F pathway, effects of 4-hydroxynonenal, **295**, 267
- HMGA1  
dominant-negative, block of  $\mu$  enhancer activation, **292**, 427
- HMGB1  
and histone H1, differential enhancement of DNA ligation reactions, **292**, 268
- Hodgkin's lymphoma  
platelet protein sialic acid levels in, **297**, 502
- Homeobox transcription factor  
Csx/Nkx2-5, dual effects on cardiomyocytes, **298**, 493
- Homeodomain  
TAAT sites in *Msx2* fragment binding, enhancer function in apical ectodermal ridge, **290**, 955  
zinc-fingers and homeoboxes 1, **297**, 368
- Homeodomain-interacting protein kinase 2  
association with Ran-binding protein, **297**, 148  
gene expression during murine embryonal development and in human neoplasias, **290**, 942
- Homeodomain proteins  
in prokaryotes, identification based on pattern and sequence similarity, **299**, 229
- Homeostasis  
glucose, role of glucagon and glucagon receptor (mouse), **290**, 839  
ions, in *Saccharomyces cerevisiae* *trk1 $\delta$ trk2 $\delta$*  mutant cells, dual effect of SKY1 and PTK2 deletions, **295**, 1142
- Homeotic proteins  
EGF-like dlk, cell growth effect and interaction with growth-modulating modules in yeast two-hybrid system, **291**, 193
- Homer1  
isoform controlling trafficking of group I metabotropic glutamate receptor in HEK293T cells, N-terminal sequence specific for, **296**, 523
- Homer1b  
identification as CaM kinase II substrate in postsynaptic density, **290**, 948
- Homer/vesl  
colocalization of membrane proteins with, technique, **295**, 756
- Homocysteine  
accumulation in serum, increase in Alzheimer's disease, **293**, 1485  
anti-angiogenic effects in cultured endothelial cells, **293**, 497  
protein-bound, selective increase, induction in rodents by fenofibrate, **295**, 1052
- Horizontal gene transfer  
arylamine *N*-acetyltransferases from bacteria to vertebrates, absence of evidence, **293**, 783

- Hormone deprivation  
and estrogen regulation of 1,25-dihydroxyvitamin D<sub>3</sub> receptor expression and response in bone cells, **299**, 446
- Hormone-sensitive lipase  
novel testicular form, characterization (human), **291**, 286  
role in enhancement of adipocyte lipolysis in exercise-trained rats, **295**, 236
- Horseradish peroxidase  
antibodies, enhancement of enzyme refolding, **291**, 959  
indole-3-acetic acid-dependent irreversible inactivation, effect of hypaphorine, **294**, 553
- HOX11*  
activation, role of complex containing PBX2, **294**, 23
- hprt* gene  
mutations, targeted gene correction by 45-base single-stranded oligonucleotides, **299**, 787
- H-ras ribozyme  
recombinant adenovirus encoding, induction of laryngeal cancer cell apoptosis by caspase- and mitochondria-dependent pathways, **298**, 805
- hRDH-E2*  
SDR family member, identification, and increased expression in psoriatic lesion, **297**, 1171
- H-rev107  
expression, induction by growth arrest and histone acetylation: role of Sp1/Sp3-binding GC-box, **294**, 63  
murine gene encoding class II tumor suppressor, gene organization and Sp1/Sp3-binding GC-box required for transcription, **293**, 793
- Hrp3  
requirement for heterochromatin silencing in fission yeast, **295**, 970
- Hrs  
isoforms 1 and 2, schwannomin interactions with, effects of *Nf2* missense mutations, **290**, 366  
ubiquitin-interacting motif from, monoubiquitin interaction with, **296**, 1222
- Hsc56  
Hsc62-Hsc56-GrpE as Hsp70 chaperone system in *Escherichia coli*, **293**, 1389
- Hsc62  
Hsc62-Hsc56-GrpE as Hsp70 chaperone system in *Escherichia coli*, **293**, 1389
- Hsc70  
complexes with Hsp90 in resting and thrombin-activated platelets, **297**, 129
- HU  
DNA-binding, compact form of DNA induced by, **290**, 546
- Human cytomegalovirus  
gB, in identification of nuclear localization signal for inner nuclear membrane in HSV-1 gB nucleoplasmic tail, **291**, 966  
immediate-early protein, dual regulatory role in *IL1B* transcription, dependence on Spi-1/PU.1, **294**, 854  
replication in MRC-5 fibroblasts, TCDD as possible activator of, **296**, 651
- Human immunodeficiency virus type 1  
antiviral activity of MAP30 and GAP31 produced in cucurbits with plant virus vector ZYMV-AGII, **292**, 441  
cDNA synthesis of, activation by topoisomerase I and ATP, **294**, 509  
gp41 leucine zipper domain, interaction with  $\alpha$ -catenin, **291**, 1239  
gp120  
activation by V3 loop-derived peptides, **297**, 625  
C4 domain, insertion into adenovirus type 2 fiber globular region, **296**, 897  
2'F-RNA aptamer binding to, structural characterization, **293**, 924  
immune activation in infected individuals, attenuated signaling associated with, **298**, 464
- Nef protein, CD4 binding to, role of helix in CD4 cytoplasmic domain, **292**, 734
- nucleocapsid protein  
interaction with d(TG)<sub>4</sub>, identification of antagonists with cellular anti-HIV activity, **296**, 1228  
RNA aptamers against, selection and stabilization, **291**, 925  
p24<sup>agg</sup>, N-terminal proline of, acid-labile formylation, detection by proteomics using 2D gel and MALDI-TOF-MS, **293**, 1107  
protease, autolysis of, effects of remote mutation, X-ray and NMR studies, **294**, 395  
replication  
implications of human topoisomerase I binding to and dissociation from hairpin-loop RNAs, **297**, 593  
in latently infected cells, inhibitory effects of IFN- $\gamma$ , **291**, 890  
RNA cleavage, reconstitution of, **293**, 1084  
V3 domain, ionic interaction with CCR5 and deregulation of T cell function, **298**, 574  
Vif, peptide derived from, inhibition of drug-resistant HIV proteases, **292**, 832  
Vpr glucocorticoid receptor coactivator activity and cell cycle arresting activity, effects of TFIIF components, **298**, 17
- Human immunodeficiency virus type 2  
protease, drug-resistant, inhibition by HIV-1 Vif-derived peptide, **292**, 832
- Human papillomavirus  
E6 and E7 oncogenes, repression by sodium arsenite, **293**, 298  
E6 proteins, interaction with fibulin-1, **296**, 962
- Human papillomavirus type 16  
associated tumor cells and tumors, effects of interleukin-2, **299**, 818  
E6 and E7 genes, and human telomerase reverse transcriptase, immortalization of mesenchymal stem cells, **295**, 354  
neutralizing antibodies against, and fate of low-grade cervical intraepithelial neoplasia, **296**, 102
- Human serum albumin  
and copper-binding site analogue d-DAHK, protective effect against copper-induced inhibition of activated protein C, **290**, 1388  
quercetin interaction with, fluorescence spectroscopy, **299**, 400
- Human systems  
systems approach to evolution, editorial, **297**, 689
- Human T cell lymphotropic virus type-I  
Fas-resistant infected T cells, blockade upstream of caspase cascade, suppression by cycloheximide, **294**, 714
- Human umbilical vein endothelial cells  
angiogenesis and apoptosis, paracrine repercussions of preconditioning, **291**, 261  
ECV304 cell line, gene IC53 stimulating proliferation of, upregulation in failing heart, **294**, 161  
expression of membrane-bound and soluble CD54 in, modulation by glucosyl transferase inhibitor, **296**, 26  
metabolic responses induced by thrombin, **293**, 979  
Pyk2 expression in two isoforms and association with paxillin and p130 Cas, **290**, 1470  
retinoic acid-inducible gene I induction by LPS, **292**, 274  
selective induction of angiopoietin-2 by hyperbaric oxygen, **296**, 710  
thrombin-stimulated Pyk phosphorylation, role of intracellular Ca<sup>2+</sup>, PKC, and Src kinases, **294**, 1001  
thymosin  $\beta$ 4 upregulation by hepatocyte growth factor, **296**, 401
- Huntingtin interacting protein  
overexpression during pancreas regeneration (rat), **299**, 806
- Huntington's disease  
enhanced SUMOylation in, **293**, 307
- huWAP2*  
identification: protease inhibitor gene highly expressed in prostate, **290**, 452
- Hyaluronan  
effects on activities of matrix metalloproteinase secreted into medium of cultured skin fibroblasts (human), **298**, 646



- MMP-2 secretion dependent on, in human small-cell lung carcinoma QG90 cells, role of focal adhesion kinase, **290**, 1123
- Hyaluronan binding protein 1/C1QBP/p32  
as endogenous substrate for MAP kinase and translocation to nucleus on mitogenic stimulation, **291**, 829
- Hyaluronan receptor  
endocytic, identification as HARE and not CD44 or CD54, **294**, 918
- Hyaluronidase  
bovine testicular  
reconstruction of glycosaminoglycan chains in decorin using, **297**, 1167  
in synthesis of carriers for attachment of glycosaminoglycan chains to peptide, **293**, 220  
modulation during chondrogenesis, **292**, 819
- Hybrid peptide  
HP (2–9)–magainin 2 (1–12), effect on plasma membrane (*Candida albicans*), **297**, 885
- Hydration  
direct, 3-octanoyl-CoA by crotonase, missing link in Konrad Bloch's enzymatic studies with 3-alkynoyl thioesters, **292**, 1171
- Hydraulic conductivity  
endothelial, effects of oscillatory shear, **293**, 1466
- Hydrocortisone  
attenuation of TNF- $\alpha$ -induced apoptosis in granulosa cells, role of modulation of Bcl-2, **294**, 51
- Hydrogen bonding  
propionic acid side chain, in malaria pigment  $\beta$ -hematin, **294**, 132
- Hydrogenobacter thermophilus* TK-6  
five-subunit-type 2-oxoglutarate:ferredoxin oxidoreductase from, **292**, 280
- Hydrogen peroxide  
AMPA-induced production in hippocampal neurons, reduction by (–)-epigallocatechin gallate, **290**, 1506  
AP-1 activation induced by, and effect on p21<sup>WAF1/CIP1</sup>-mediated G2/M arrest in p53-deficient human lung cancer cells, **293**, 1248  
apoptosis induced by, Ets-2-induced sensitization of cells to, implications for Down's syndrome, **287**, 1003; *erratum*, **291**, 191  
generation, relationship to inhibition of  $\beta$ -catenin/Tcf activity by white tea, green tea, and epigallocatechin-3-gallate, **296**, 584  
identification as endothelium-derived hyperpolarizing factor in human mesenteric arteries, **290**, 909  
induction of *GADD153* gene in vascular smooth muscle cells, mechanism, **290**, 1255  
interleukin-8 release in vitro induced by, effect of antioxidant cocktail EM-X, **296**, 1148  
mediation of arterial relaxation by leukemia inhibitory factor, **294**, 359  
oxidative stress  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653  
tyrosine phosphorylation of clathrin heavy chain under, **297**, 353  
production by pterin photooxidation in vitiligo, **292**, 805  
reaction of hexa-coordinate ferric lignin peroxidase with, spectrophotometric study, **297**, 406  
regulation of protein phosphatase 2A, **293**, 610  
removal by creatine, **290**, 47  
role in alkylitaconate effect on cellulolytic active oxygen species hydroxyl radical production (*Ceriporiopsis subvermispora*), **297**, 918  
role in damage of DNA by benzo[a]pyrene-7,8-dione, **290**, 778  
stimulation of B cells, induction of Btk–Atk interactions, **293**, 1319
- Hydrogen sulfide  
in brain, decrease in Alzheimer's disease, **293**, 1485
- Hydrolysis  
cholesteryl esters in macrophages, role of hormone-sensitive lipase, **292**, 900  
guanine nucleotides by Cdc42, kinetics, effect of Mg<sup>2+</sup>, **297**, 653  
imide, role of metal (pig), **297**, 1027  
nitrophenyl- $\beta$ -lactam, catalysis by rat monoclonal antibody, **299**, 273  
oligopeptides, trypsin-catalyzed, substrate binding energy and activation energy for, **290**, 494  
by salivary amylase, mechanism: role of subsite S2' residues, **292**, 468
- Hydrophobic  $\alpha$ -hairpins  
peptides involved in, identification of membrane interacting segments using viral fusion peptides, **293**, 1153
- Hydrophobicity  
amorphous aggregates of carbonic anhydrase, analysis with hydrophobic dye, **293**, 572  
fungicidal PMAP-23-based peptide analogs, **293**, 321  
p53 C-terminal peptide, correlation with carrier-mediated membrane transduction and apoptosis, **298**, 439  
tryptophan-241 environment in 33-kDa protein from spinach photosystem II, fluorescence study, **293**, 593
- Hydrophobic peptides  
specificity of EF-Tu for, **296**, 749
- Hydroxyapatite  
crystal growth, inhibition by bone proteoglycans and components, **292**, 727
- 22(R)-Hydroxycholesterol  
dominant expression of ABCA1 on basolateral surface of Caco-2 cells stimulated by, **296**, 625  
effect on macrophage cholesterol efflux to free apolipoprotein A-I in C3H and C57BL/6 mice, **290**, 1376
- Hydroxycholesterols  
and cholesterol and bile acid synthesis: Konrad Bloch special issue, **292**, 1147
- Hydroxy fatty acids  
yeast, and fungal polyketides: Konrad Bloch special issue, **292**, 1213
- Hydroxyflutamide  
effect on androgen receptor protein turnover, **294**, 779
- 8-Hydroxyguanine  
arsenite-induced, association with repair activity inhibition (A549 cells), **297**, 924  
loss in DNA treated with reactive oxygen species, implications for assessment of oxidative damage in vivo, **296**, 883
- Hydroxylation  
stereoselective, 4-methyl-2-cyclohexenone, relevance to R-(+)-pulegone-mediated hepatotoxicity (rat), **297**, 202
- Hydroxyl radical  
produced by Fenton reaction, activation of caspase-3 and DNA cleavage in osteoclasts, **292**, 94  
scavenging effect of curcumin, **295**, 62
- 4-Hydroxynonenal  
cytotoxic and cytostatic effects in osteosarcoma cells (human), **293**, 1502  
effects on pRb/E2F pathway in HL-60 cells, **295**, 267  
macrophage MCP-1 release induced by, role of activation of PKC- $\beta$  isoforms, **294**, 547  
quenching by carnosine, mechanism, **298**, 699  
vascular smooth muscle cell injury induced by, protective effect of chemically induced cellular antioxidants, **292**, 50; *erratum*, **294**, 1192
- 1-Hydroxy-2-oxo-3,3-bis(2-aminoethyl)-1-triazene  
effects on vascular endothelial growth factor gene induction, **296**, 976
- Hydroxypropyl- $\beta$ -cyclodextrin,  
and benzaldehyde semicarbazone, inclusion compound with, anti-convulsant activity, **296**, 241
- 2-Hydroxypyridine N-oxide  
one-electron oxidation, and inhibition of lipid peroxidation, **299**, 155
- 4D-Hydroxyphinganine 1-phosphate  
high affinity for SIP<sub>4</sub>/Edg-6 receptor, **297**, 600



- 3 $\beta$ -Hydroxysteroid dehydrogenase  
effect of peroxisome proliferator di(2-ethylhexyl)phthalate, **293**, 549  
type I, polymorphism in exon 4 of *HSD3B1* gene encoding, relationship to blood pressure, **293**, 629
- Hygrolidin  
induction of p21 expression and abrogation of cell cycle progression at G1 and S phases, **298**, 178
- Hypaphorine  
effect on indole-3-acetic acid-dependent irreversible inactivation of horseradish peroxidase, **294**, 553
- Hyperbaric oxygen  
selective induction of angiopoietin-2 in human umbilical vein endothelial cells, **296**, 710
- Hyperbilirubinemia  
associated defect in UGT1A1 gene promoter, identification, **292**, 492
- Hypercholesterolemia  
effect of hyperlipidemia induced by high-cholesterol diet on heat shock response in rat heart, **290**, 1535
- Hyperglycemia  
replicative senescence induced by, **296**, 93
- Hyperleptinemia  
adenovirus-induced, associated atrophic change of salivary gland (rat), **291**, 675
- Hyperlipidemia  
induced by high-cholesterol diet, inhibition of heat shock response in rat heart, **290**, 1535
- Hypermethylation  
DNA, silencing of maspin gene in breast cancer, **297**, 125
- Hyperosmotic stress  
and salt stress, regulation of expression of different sets of genes in *Synechocystis* sp. PCC 6803, **290**, 339
- Hyperphagia  
late-onset obesity induced by, in 5-HT<sub>2C</sub> receptor mutant mice, altered gene expression in, **295**, 249
- Hyperphosphorylation  
tau protein, role of p35 cleavage to p25, **298**, 693
- Hyperplasia  
muscle, induction without hypertrophy by missense myostatin mutant (mouse), **293**, 247
- Hyperpolarization  
effect on intracellular Ca<sup>2+</sup> levels in cultured chick myoblasts, **290**, 1176
- Hypertension  
differentially expressed genes in spontaneously hypertensive and Wistar-Kyoto rats from two sources, **296**, 537  
enhancement of V-1 expression in atrial myocytes of Dahl salt-sensitive rat, **298**, 793  
nitric oxide effects on Mg<sup>2+</sup> influx in proximal tubule cells from DS and DR rats, **294**, 710  
salt-sensitive, aquaporin-2 transcript expression in, analysis with Sprague-Dawley and Dahl SS/Jr rats, **296**, 755  
splicing mutation in prostacyclin synthase gene in family associated with, **297**, 1135
- Hyperthermia  
breast cancer cell sensitivity to, effect of HSF1 inhibition by dominant-negative mutant, **290**, 1454
- Hypertonicity-responsive element  
in human aquaporin-1 gene, identification and characterization, **292**, 771
- Hypertrophic growth  
cardiac, *HAND1* and *HAND2* modulation during, analysis (mouse), **297**, 870  
cardiomyocytes, induction by expression of cyclin D1 and CDK4, implications for cardiac hypertrophy, **296**, 274
- Hypochlorous acid  
chlorination of folic acid, **297**, 1238  
generation by activated macrophages, **292**, 869
- Hypocrellin-A  
photodynamic therapy of human brain tumor cells with, release of angiogenesis regulators after, **298**, 520
- Hypocrellin-B  
photodynamic therapy of human brain tumor cells with, release of angiogenesis regulators after, **298**, 520
- Hypocretins  
activation of histaminergic neurons via orexin 2 receptor, **290**, 1237  
hypothalamic mRNA expression, modulation by glucocorticoids, **296**, 129  
stimulation of [<sup>35</sup>S]GTP $\gamma$ S binding in Hertr 2-transfected cell lines and in brain homogenates, **294**, 615
- Hypophosphorylation  
translation initiation regulators in rat liver during ethionine-mediated ATP depletion, **298**, 235
- Hypothalamus  
hypocretin/orexin mRNA expression, modulation by glucocorticoids, **296**, 129  
leptin receptor-containing neuron distribution (pig), **298**, 333  
SOCS-3 expression, increase with aging, effects of food restriction (rat), **296**, 425
- Hypotonicity  
translocation of ENaC in renal epithelial A6 cells induced by, calmodulin-dependent regulation of, **298**, 619
- Hypoxia  
activation of  $\beta_1$ -integrin via ERK1/2 and p38 MAP kinase in human vascular smooth muscle cells, **296**, 890  
adaptive molecular responses during zebrafish development, cDNA microarray study, **296**, 1134  
apoptosis induced by, inhibition by 2-deoxy-D-ribose, molecular basis, **291**, 806  
effect on excitatory transmission in substantia gelatinosa neurons (rat), **295**, 929  
induction of HIF-1 $\alpha$  and oxygen-regulated gene expression in mtDNA-depleted HeLa cells, **297**, 346  
inhibition of TRAIL-induced apoptosis, **291**, 150  
paradoxical relationship to angiogenesis in cancer prognosis, **299**, 676  
responses to, role of MOP3, **290**, 1228  
7-helix transmembrane receptor induced by, expressed in pulmonary epithelial cells, genomic organization and regulation (human), **291**, 1160  
signal transduction pathway, HIF-1 $\alpha$ -prolyl hydroxylase as molecular target of nitric oxide in, **295**, 657
- Hypoxia-inducible factor-1  
activity in endothelial cells, modulation by quercetin, **293**, 446  
binding to vascular endothelial growth factor gene promoter, effects of NO donors, **296**, 976  
role in paradoxical relationship of hypoxia, angiogenesis, and cancer prognosis, **299**, 676
- Hypoxia-inducible factor-1 $\alpha$   
hypoxic activation by nitric oxide, **295**, 657  
hypoxic induction in mitochondrial DNA-depleted HeLa cells, **297**, 346  
stabilization, and cobalt- and nickel-binding property of cullin-2, **290**, 294  
stabilization of vascular endothelial growth factor mRNA, **291**, 908
- Hypoxia-inducible transcription factors  
activity, modulation by overexpression of proline 4-hydroxylase PH-4, **296**, 343
- Hypoxia/reoxygenation  
with astrocyte involvement, role in blood-brain barrier development, **290**, 325
- Hypoxia-reoxygenation injury  
myocyte, protective effects of mixed tocopherol preparation vs tocopherol alone, **291**, 349

## I

- IC53  
stimulation of ECV304 cell proliferation and upregulation in failing heart, **294**, 161
- icmF* gene  
induced in vivo, role in *Vibrio cholerae* motility, adherence to epithelial cells, and conjugation frequency, **295**, 922
- I domain  
CD11c, loops critical for specific recognition of fibrinogen, **292**, 756
- IF3  
as cell differentiation factor highly expressed in murine liver and ovary, **297**, 323
- IgA nephropathy  
immune complex deposition, candidate receptor: Fc $\alpha$ / $\mu$ R, expression by human mesangial cells, **290**, 438
- IgE-dependent histamine-releasing factor  
synthesis and secretion, stimulation by dioxin, **290**, 984
- I $\kappa$ B  
induction by atrial natriuretic peptide, **295**, 1068
- I $\kappa$ B $\alpha$   
dominant negative, recombinant adenoviral expression of, protection of brain from cerebral ischemic injury, **299**, 14
- I $\kappa$ B- $\alpha$ /NF- $\kappa$ B  
nuclear translocation and activation, redox regulation of, **296**, 847
- I $\kappa$ B kinase  
activation in murine macrophages, induction by phosphatase inhibition, **297**, 1264  
catalytic subunits IKK-1 and IKK-2, expressed as homodimers, non-equivalent active sites in, **293**, 1508
- Ikaros  
and AP-2, regulation of transcription of human placental leucine aminopeptidase/oxytocinase gene, **290**, 1048
- ILK–affixin complex  
role in integrin–cytoskeleton linkage during platelet aggregation, **297**, 1324
- Imidase  
role of metal (pig), **297**, 1027
- Imidazolines  
tobacco acetolactate synthase resistance to, role of lysine residues 219 and 255, **293**, 433
- Imide hydrolysis  
role of metal (pig), **297**, 1027
- Iminodiacetate  
degradation by *Kluyveromyces marxianus* IMB3, **290**, 802
- Immobilization  
covalent, DNA on polymer-shielded silver-coated quartz crystal microbalance using photobiotin-based UV irradiation, **290**, 962
- Immortalization  
hepatocytes, in transgenic mouse lines, **294**, 864  
mesenchymal stem cells by combination of human telomerase reverse transcriptase and HPV E6 and E7, **295**, 354
- Immune activation  
in HIV-1-infected individuals, attenuated signaling associated with, **298**, 464
- Immune boosting  
effects mediated by pH-sensitive liposomes encapsulated with K<sup>b</sup>-restricted CTL epitope in vivo, **292**, 682
- Immune complex deposition  
in IgA nephropathy, candidate receptor: Fc $\alpha$ / $\mu$ R, expression by human mesangial cells, **290**, 438
- Immune system  
humoral, head and neck cancer antigens recognized by, **294**, 734
- Immunization  
passive, potential application of anti-Hantaan virus monoclonal antibodies, **298**, 552
- Immunoaffinity chromatography  
identification of G proteins coupling to vasoactive intestinal peptide receptor VPAC<sub>1</sub>, **290**, 1300; *erratum*, **293**, 1580
- Immunoblotting  
anti-p53 antibodies in, comparison, **293**, 850
- Immunochemical reactivity  
*Escherichia coli* UMP kinase, **294**, 173
- Immunocytochemistry  
cystic fibrosis transmembrane conductance regulator in airway epithelial cells after S-nitrosoglutathione treatment, **297**, 552  
leptin receptors, neuropeptide Y, and tyrosine hydroxylase in autonomic neurons supplying fat depots (pig), **293**, 1138
- Immunoelectron microscopy  
cleavage of Col6A3 C5 domain from Col6 fibrils after secretion, **290**, 743  
scanning, analysis of epitopes on endometrial epithelium, **292**, 102
- Immunofluorescence staining  
detection of cell surface expression of specific antigenic site on catalytic subunit of Na<sup>+</sup>,K<sup>+</sup>-ATPase, **291**, 111
- Immunoglobulin E  
heavy chain germline transcripts, expression in DND39 B cells, inhibition by PPAR- $\gamma$  ligands, **295**, 547  
ovomucoid epitopes for, identification and fine mapping, **292**, 1070  
trichosanthin-induced response, amino acid residues crucial for, identification, **297**, 510
- Immunoglobulin E receptor  
affinity improvement by phage display, **293**, 542
- Immunoglobulin G  
ovomucoid epitopes for, identification and fine mapping, **292**, 1070
- Immunoglobulin M  
light chain gene promoter activity, downregulation by histone deacetylase 2 (chicken), **299**, 263
- Immunoglobulins  
domain 1, GP120 utilization by, role of CD4 hinge region, **292**, 449  
gene preferentially expressed by brain and testis, molecular cloning, **296**, 1215  
human, anchorless streptococcal surface protein binding to, **296**, 1329
- Immunogold  
functionalized gold colloids for single particle tracking experiments, **295**, 610
- Immunohistochemistry  
analysis of epitopes on endometrial epithelium by scanning immunoelectron microscopy, **292**, 102  
gonadotropin-releasing hormone-like peptide in central nervous system (*Octopus vulgaris*), **291**, 1187  
RCAS1 detection in ductal breast cancer biopsies, **293**, 1544
- Immunomagnetic capture  
lens membrane fractions containing steroid binding protein, **295**, 1027
- Immunomagnetic separation  
purification of multi-potential cells from mixed developing pancreatic cells using lectin as marker, **293**, 691
- Immunoreceptor tyrosine-based activation motif, *see* ITAM
- Immunoreceptor tyrosine-based inhibitory motif, *see* ITIM
- Immunorphin  
identification as selective nonopioid  $\beta$ -endorphin receptor agonist, **292**, 799
- Immunoscreening  
phage-displayed cDNA-encoded polypeptides, identification of B cell targets in autoimmune disease by, **298**, 169
- Immunoselection  
human osteoprogenitors: bone formation on PLA scaffolds in vivo, **299**, 208



- Immunostimulation**  
by CpG oligonucleotides with phosphodiester linkages, **297**, 83
- Immunosuppression**  
in vitro selection of specific RNA inhibitors of NFATc, **298**, 486
- Immunotherapy**  
potential application of anti-Hantaan virus monoclonal antibodies, **298**, 552
- Imprinted genes**  
identification by high-throughput screening using RIKEN cDNA microarray: *Asb4*, *Ata3*, and *Dcn*, **290**, 1499
- Imprinting**, *see* Genomic imprinting
- Incadronate disodium**  
inhibition of advanced glycation end products-induced angiogenesis in vitro, **297**, 419
- Incretins**  
degradation by dipeptidylpeptidase IV, effects of metformin, **291**, 1302; comment, **296**, 229
- Indole-3-acetic acid**  
irreversible inactivation of horseradish peroxidase dependent on, effect of hypaphorine, **294**, 553
- Indolocarbazole compounds**  
resistance to, conferral by ABCG2 via ATP-dependent transport, **299**, 669
- Indomethacin**  
effect on expression of *MRP* and  $\gamma$ -glutamylcysteine synthetase genes in human colon cancer cells, **290**, 1427  
reversal of cyclooxygenase-2-induced increase in angiogenic and metastatic potential of tumor cells, **299**, 886
- Inflammation**  
atherosclerotic,  $\alpha$ -tocopheryl succinate activity against, dependence on pro-vitamin-to-vitamin conversion, **293**, 1309  
CBP-NF- $\kappa$ B interaction in activated microglia, inhibition by VIP and PACAP, **297**, 1181  
and macrophage activation, role in regulation of CD9 expression, **290**, 891  
neurogenic, vascular leakage induced by, reduction by loss of placental growth factor (mouse), **295**, 428  
pro-inflammatory effect of TWEAK/Fn14 interaction on human umbilical vein endothelial cells, **299**, 488  
pulmonary  
acute, modulation by ST2 protein induced by inflammatory stimuli, **299**, 18  
monitored noninvasively by MRI in freely breathing rats, **292**, 216  
regulation by neuropeptides, and VIP/PACAP interference with stress-induced SAPK/JNK pathway, **293**, 771  
responses by lung-specific cells, modulation by lipopolysaccharide binding protein, **295**, 553  
upregulation of ASC in neutrophils (human), **293**, 1314
- Inflammatory bowel disease**  
genome-wide multilocus analysis, **295**, 771  
quantitative analysis of human glucocorticoid receptor  $\alpha/\beta$  mRNA in, **296**, 1286
- Influenza virus**  
infection, effect on  $\gamma\delta$  T cells in buccal epithelium (mouse), **294**, 626
- Infrared spectroscopy**  
GPI-alkaline phosphatase from bovine intestine: thermal and pH stabilities, **292**, 874
- ING1 protein**  
mouse homolog, nuclear localization signal in, characterization, **293**, 163
- Inhibitor of apoptosis protein**  
from *Trichoplusia ni*, expression and functional analysis, **293**, 675
- Inhibitor of apoptosis protein 2**  
TRAIL-induced upregulation, inhibition by IFN- $\gamma$ , role in IFN- $\gamma$ -enhanced TRAIL-induced apoptosis, **291**, 233
- Injury**  
skeletal muscle, induction of hepatocyte growth factor expression in spleen, **292**, 709
- Inner ear**  
aquaporin 4 expression and role in hearing (knockout mouse), **297**, 987
- Inner nuclear membrane**  
localization of reporter protein in, conferral by three-residue signal, **291**, 966
- Inorganic chemical systems**  
systems approach to evolution, editorial, **297**, 689
- Inorganic pyrophosphatase**  
activity and conformational integrity, role of C-terminal sequence (*Bacillus subtilis*), **290**, 806  
Family I, paralogous *ppa* genes encoding, expression and inactivation in marine cyanobacteria, **295**, 890  
proton-translocating, wide occurrence of genes in parasitic and free-living protozoa, **294**, 567
- Inositol**  
lowering of oxygenase activity of Rubisco, **298**, 247
- chiro-Inositol**  
and *myo*-inositol, ratio in tissues of GK type 2 diabetic rats compared to Wistar controls, **293**, 1092
- myo-Inositol**  
and *chiro*-inositol, ratio in tissues of GK type 2 diabetic rats compared to Wistar controls, **293**, 1092
- chiro-Inositol epimerase**  
activity decrease in tissues of GK type 2 diabetic rats compared to Wistar controls, **293**, 1092
- myo-Inositol epimerase**  
activity decrease in tissues of GK type 2 diabetic rats compared to Wistar controls, **293**, 1092
- Inositol phosphoglycans**  
insulin-stimulated generation in liver membranes, role of G<sub>q/11</sub> (rat), **295**, 561
- Inositol 1,4,5-trisphosphate**  
production upon G protein activation of angiotensin II receptor type 1A, role of DRY motif (rat), **292**, 362  
regulation of type III InsP<sub>3</sub> receptor, **294**, 719  
signal, triggering of receptor-mediated ATP release, **293**, 686
- Inositol 1,4,5-trisphosphate 3-kinase B**  
full-length cDNA, cloning and expression (human), **291**, 400
- Inositol 1,4,5-trisphosphate receptor**  
type III, regulation by InsP<sub>3</sub> and calcium, **294**, 719
- Insect cells**, *see also* Baculovirus/insect cell expression system  
SF9 cells  
adenylyl cyclase activation by  $\beta_2$ -adrenoceptor-G $\alpha_2$  fusion protein, **298**, 824  
apoptosis, inhibition by silkworm hemolymph, **295**, 779  
ecdysone agonist activity of chromafenozide in, **292**, 1087  
SF21 cells, telomerase catalytic subunit expression: activity reconstitution, **298**, 144
- Insulin**  
chronic treatment with, insulin resistance induced by, partial prevention by rapamycin, **293**, 1021  
*Drosophila* insulin/relaxin-like peptide gene, cloning, characterization, and embryonic expression, **295**, 312  
effects on adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084  
effects in MCF-7 cells, inhibition by dominant negative  $\alpha$  subunit of farnesyltransferase, **291**, 458  
effects on subcellular localization of fatty acid translocase/CD36 in rat cardiac muscle, and GLUT4 localization, **293**, 665  
Falp responsiveness in 3T3-L1 adipocytes, **293**, 1161  
fatty acid synthase gene expression stimulated by, relationship to sterol response element binding protein 1 transcription in adipocytes, **291**, 439



- glucose-stimulated secretion, role of pyruvate dehydrogenase activation, **291**, 1081
- impaired glucose-induced secretion in hereditary diabetic rats, and overexpression of protein-tyrosine phosphatase  $\sigma$ , **291**, 945
- ins1* and *ins2* genes, differential expression in MIN6 cells and pseudoislets, **296**, 589
- modulation of proximal SREBP-1c promoter in rat hepatocytes, **290**, 256
- plasma levels, relationship to circulating levels of ghrelin (rat), **292**, 1031
- regulation of *pdx1* gene promoter in pancreatic beta cells, **299**, 277
- responses to, restoration by metformin (rat), **291**, 722
- role in leucine promotion of glucose uptake by skeletal muscle (rat), **299**, 693
- secretion
- effect of enzyme-resistant antagonist of GIP receptor, **290**, 1420
  - parallel with extracellular acidification in INS-1 and HIT-T15  $\beta$ -cell lines, cytosensor use, **293**, 1168
  - sensitivity in OLETF rat, improvement by fenofibrate, **296**, 293
  - sequential exocytosis in pancreatic islet  $\beta$  cells, visualization (rat), **292**, 980
  - signaling in adipocytes, regulation by proteasome inhibitors, **296**, 1257
  - stimulation of acyl-coenzyme A:diacylglycerol acyltransferase mRNA expression, **298**, 317
  - stimulation of inositol phosphoglycan generation in liver membranes, role of  $G_{q/11}$  (rat), **295**, 561
  - stimulation of nitric oxide production in rat adipocytes, **291**, 394
  - superactive, creation by modification of histidine (B10), **290**, 775
  - suppression of VLDL apoB secretion, role of LDL receptor, **297**, 134
  - synthesis and secretion, genes involved in, targeted expression measurements in islets of Langerhans (human), **298**, 350
  - tyrosine kinase pathway independent of, shikonin stimulation of glucose uptake in 3T3-L1 adipocytes via, **292**, 642
- Insulin-like growth factor
- effects of non-IGF binding mutant of IGFBP-5 on cell death in human breast cancer cells, **294**, 995
  - non-IGF binding mutant of IGFBP-3, modulation of cell function in breast epithelial cells, **294**, 988
- Insulin-like growth factor I
- effects in MCF-7 cells, inhibition by dominant negative  $\alpha$  subunit of farnesyltransferase, **291**, 458
  - induction of caveolin 1 tyrosine phosphorylation and translocation in lipid rafts, **295**, 1085
  - mitogenic activity dependent on, enhancement by PKC  $\zeta$  in rat clonal  $\beta$  cell line RIN 1046-38, **290**, 85
  - mRNA, augmentation by FGF-2 in mouse marrow stromal cells, **290**, 526
  - regulation of cap-dependent translation in neuronal cells, **291**, 560
  - for use in sequential cellular de- and redifferentiation in tissue engineering using, **294**, 149
- Insulin-like growth factor binding protein 3
- amino-terminal region, induction of apoptosis of MCF-7 breast cancer cells, **293**, 55
  - enhanced expression of, sensitizing effect on anticancer drug inhibition of gastric cancer cell growth, **294**, 480
  - non-IGF binding mutant, modulation of cell function in breast epithelial cells, **294**, 988
  - promoter, activation by trichostatin A via upregulation of Sp1 in hepatoma cells, **296**, 1005
- Insulin-like growth factor binding protein 5
- non-IGF binding mutant, effects on cell death in human breast cancer cells, **294**, 995
- Insulin-like growth factor I receptor
- expression at normal levels in Nijmegen breakage syndrome cells, **296**, 62
- Insulin mimicy
- zinc, and inhibition of glycogen synthase kinase-3 $\beta$  by  $Zn^{2+}$ , **295**, 102
- Insulinoma cells
- differential expression of insulin genes 1 and 2 (MIN6 cells), **296**, 589
  - INS-1, *see* Insulin-secreting cells
  - living, nuclear translocation of SHP and visualization of interaction with HNF-4 $\alpha$  (MIN6 cells), **292**, 8
- Insulin receptor
- altered distribution on erythrocytes from NIDDM patients and protective effects of *N*-acetylcysteine, **290**, 1393
  - colocalization with  $G_{q/11}$  in liver membrane vesicles (rat), **295**, 561
- Insulin receptor substrate-1
- levels in adipocytes, decrease after chronic insulin treatment, prevention by rapamycin, **293**, 1021
  - tyrosine phosphorylation in adipocytes, regulation by proteasome inhibitors, **296**, 1257
- Insulin-receptor tyrosine kinase 58/53-kDa substrate
- identification as CaM kinase II substrate in postsynaptic density, **290**, 948
- Insulin/relaxin-like peptide
- Drosophila*, DIRLP gene cloning, characterization, and embryonic expression, **295**, 312
- Insulin resistance
- glucosamine-induced, role of Akt, **292**, 308
  - hormones inducing, effects in regulating adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084
  - induced by chronic insulin treatment, partial prevention by rapamycin, **293**, 1021
  - metformin effect on adipose tissue resistin expression in *db/db* mice, **298**, 345
- Insulin-secreting cells
- generation of novel type of poorly synchronized  $Ca^{2+}$  transients (INS-1 cells), **293**, 842
  - transcriptional regulation of *mif* gene by glucose (INS-1 cells), **295**, 174
- Integration host factor
- DNA bending structure of promoter regulatory region of *Pseudomonas* TOL plasmid induced by, AFM study, **291**, 361
- $\alpha_1\beta_1$  Integrin
- collagen matrix remodeling mediated by, stimulation in mesangial cells by endothelin-1 (rat), **299**, 555
- $\alpha_2\beta_1$  Integrin
- functionally active soluble heterodimer complex, production, **290**, 305
- $\alpha_3\beta_1$  Integrin
- role in  $\beta$ ig-h3 support of keratinocyte adhesion, migration, and proliferation, **294**, 940
- $\alpha_4\beta_1$  Integrin
- mediation of osteosarcoma cell adhesion to 70-kDa core region of thrombospondin-1, **293**, 86
- $\alpha_v\beta_3$  Integrin
- engagement, regulation of phosphoinositide 3-kinase C2 $\alpha$  in smooth muscle cells by, **297**, 261
- $\beta$ -Integrin
- binding by p27<sup>BBP</sup>/eIF6, **295**, 295
- $\beta_1$ -Integrin
- activation by hypoxia via ERK1/2 and p38 MAP kinase in human vascular smooth muscle cells, **296**, 890
- $\beta_2$ -Integrin
- modifications by dietary coenzyme Q10: non-antioxidant mechanism for CoQ anti-atherogenic effects, **296**, 255
  - physical association with GPI-80, **294**, 692
- $\beta_5$  Integrin
- intracellular part, binding of annexin-V, **292**, 550
- Integrin–cytoskeleton linkage
- during platelet aggregation, role of ILK–affixin complex, **297**, 1324

- Integrin-linked kinase  
role of ILK–affixin complex in integrin–cytoskeleton linkage during platelet aggregation, **297**, 1324
- Integrins  
interaction with ECM proteins in shear-activation of PI 3-kinase and JNK in endothelial cells, **292**, 892  
and RGD peptides, micromechanical coupling between, **296**, 771
- Intercellular adhesion molecule-1  
membrane topography in colon carcinoma cells, rearrangement by interferon- $\gamma$ , **290**, 635  
NF- $\kappa$ B-mediated induction by TNF- $\alpha$  in endothelial cells, regulation by atrial natriuretic peptide, **295**, 1068  
TNF- $\alpha$ -induced expression in sinusoidal endothelial cells, inhibition by double-stranded decoy DNA oligomer for NF- $\kappa$ B, **298**, 10
- Intercellular junctions  
focal adhesion kinase N-terminal domain localization independently of Tyr397 and C-terminal domain, **299**, 62
- Intercellular trafficking  
herpes simplex virus type 2 UL14 deletion mutant proteins, **298**, 357
- Interchromosomal telomere length variation  
correlation of relative telomeric repeat content with chromosome size, **291**, 210
- Interfacial enzymatic catalysis  
kinetics and thermodynamics, analysis by differential scanning calorimetry, **297**, 446
- Interferon  
type I, Rap1 gene transcription and activation dependent on, role of CrkL adapter protein, **291**, 744
- Interferon- $\alpha$   
antiviral gene induction mediated by, in hepatoma cells, role of IL-1 $\beta$  and IL-10 (human), **294**, 414
- Interferon- $\alpha$ 2  
human, efficiency of expression in *E. coli*, effect of use of tRNA<sub>AGA/AGG</sub>, **296**, 1303
- Interferon- $\alpha$ 8  
human, efficiency of expression in *E. coli*, effect of use of tRNA<sub>AGA/AGG</sub>, **296**, 1303
- Interferon- $\beta$   
double-stranded RNA-mediated production, block by monoclonal antibody against Toll-like receptor 3, **293**, 1364  
secreted from human hair dermal papilla cells, inhibition of growth of outer root sheath cells in vitro, **290**, 1133
- Interferon- $\gamma$   
cytotoxicity for vascular endothelial cells, role of nitric oxide, **291**, 780  
downregulation of macrophage CD9 expression, **290**, 891  
efficacy in vivo, effect of adenovirus-mediated transfer of murine IFN- $\gamma$  receptor, **290**, 1042  
enhancement of TRAIL-induced apoptosis, role of inhibition of TRAIL-induced IAP-2 upregulation, **291**, 233  
expression after acetaminophen treatment in MIF-/- mice, **294**, 225  
inhibitory effects on HIV-1 replication in latently infected cells, **291**, 890  
mediation of superantigen-induced tumor cell apoptosis, **290**, 1336  
rearrangement of membrane topography of MHC-I and ICAM-1 in colon carcinoma cells, **290**, 635  
STAT1 activity mediated by, suppression in hepatocytes, role of nuclear phosphatases and proteasome, **299**, 574
- Interferon- $\gamma$  receptor  
murine, adenovirus-mediated transfer, effect on IFN- $\gamma$  efficacy in vivo, **290**, 1042
- Interleukin-1  
chemokine production induced by, prevention in human endothelial cells by APC05761, **293**, 945  
induction of MMP-9 expression in C6 glioma cells, inhibition by PDGF via PI 3-kinase-dependent pathway, **296**, 864  
mediation of superantigen-induced tumor cell apoptosis, **290**, 1336  
signal transduction, effect of murine IRAK-2, **297**, 52
- Interleukin-1 receptor  
knockout mice, mortality and course of anthrax infection in, **292**, 41
- Interleukin-1 receptor antagonist  
expression in brain, induction by leptin, **294**, 215
- Interleukin-1 receptor-associated kinases  
IRAK-2, identification and characterization (mouse), **297**, 52  
IRAK-M, identification and characterization, **293**, 1472
- Interleukin-1 $\alpha$   
effects on apolipoprotein M expression in HepG2 cells, **292**, 944  
production and secretion by testis (rat), **297**, 492
- Interleukin-1 $\beta$   
expression in microglia, stimulation by glia maturation factor overexpression in astrocytes via GM-CSF secretion, **294**, 238  
gene transcription  
dual regulatory role of human cytomegalovirus immediate-early protein in, dependence on Spi-1/PU.1, **294**, 854  
in mammalian cells, activation by human lactoferrin, **290**, 236  
induction of MMP-9 via reactive oxygen species and NF- $\kappa$ B in murine RAW 264.7 macrophages, **298**, 251  
lipopolysaccharide-mediated biosynthesis, attenuation in alveolar epithelial cells by NF- $\kappa$ B blockade, **293**, 252  
pro-IL-1 $\beta$  processing enhancement by Nod1 via interaction with pro-caspase-1, **299**, 652  
regulation of cyclooxygenase-2 expression in articular chondrocytes, role of  $\beta$ -catenin, **296**, 221  
release by alveolar epithelial cells, redox regulation of, **296**, 847  
role in IFN- $\alpha$ -mediated antiviral gene induction in hepatoma cells (human), **294**, 414  
secretion from macrophages and monocytes, role of ATP binding cassette transporter A1, **291**, 598  
stimulation of osteoprotegerin secretion from prostate cancer cells, **293**, 451  
toxicity in  $\beta$  cell line INS-1E, potentiation by fatty acids, **296**, 189
- Interleukin-2  
inhibition of proliferation of HPV-associated tumor cells and tumor growth in vivo, **299**, 818  
mediation of upregulation of urokinase plasminogen activator and uPA receptor in natural killer cells, **292**, 184  
T cell receptor-induced transcription activation, mediation by DOCK2, **296**, 716  
and TGF- $\beta$ 1, induction in naive CD4<sup>+</sup> T cells, distinct thresholds controlling, **299**, 148
- Interleukin-2 receptor  
signaling via Shb adapter protein in T and natural killer cells, **296**, 929
- Interleukin-4  
Stat6 activity and VCAM-1 expression induced by, phytochemical inhibition, **292**, 841
- Interleukin-4 receptor  
genetic variant in atopic dermatitis, **292**, 776
- Interleukin-6  
activation of HSP72 gene expression in human skeletal muscle, **296**, 1264  
IL-6/gp130/STAT-3 signaling pathway, PGE<sub>2</sub> stimulation of prostatic intraepithelial neoplasia cell growth via, **290**, 249  
induction of expression of *Fli-1* proto-oncogene via STAT3, **292**, 287  
and interleukin-10, release by macrophages, differential effects of thrombospondin-1, **290**, 1551  
intracerebroventricular treatment with, effect on body fat (rat), **293**, 560  
lipopolysaccharide-mediated biosynthesis, NF- $\kappa$ B-independent regulation, **291**, 1045  
release by alveolar epithelial cells, redox regulation of, **296**, 847  
signaling pathway mediated by, regulation by TC-PTP via STAT3 dephosphorylation, **297**, 811



- synthesis in osteoblast differentiation, control by isoflavones via estrogen receptor-dependent pathway, **295**, 417
- Interleukin-8  
oxidant-induced release in vitro, effect of antioxidant cocktail EM-X, **296**, 1148  
production regulation by RET tyrosine kinase activation by multiple signaling pathways, **294**, 642
- Interleukin-10  
expression after intramuscular DNA electrotransfer, kinetic studies, **299**, 29  
and interleukin-6, release by macrophages, differential effects of thrombospondin-1, **290**, 1551  
redox- and oxidant-mediated regulation, review, **297**, 163  
role in IFN- $\alpha$ -mediated antiviral gene induction in hepatoma cells (human), **294**, 414
- Interleukin-12  
hsp60-induced hyperproduction in macrophages of diabetes-prone NOD mice, **294**, 592  
secretion by dendritic cells, modulation by vitamin D<sub>3</sub> and glucocorticoid pathways, **297**, 645  
STAT4 activated by IL-12 in NK cells by, human perforin gene as direct target of, **297**, 1245
- Interleukin-15  
natural killer cell cytotoxicity stimulated by, impairment in leptin receptor-deficient mice, **298**, 297  
upregulation of iNOS expression and NO production by gingival epithelial cells, **297**, 329
- Interleukin-18  
enhanced production by UVB irradiation in human keratinocytes, role of ROI and AP-1 signaling, **298**, 289  
expression via JNK pathway in peritoneal macrophages, inhibition by heat shock response, **296**, 742  
gene expression in myeloid cells, effects of histone deacetylase inhibitors, **292**, 937
- Internalization  
*Helicobacter pylori*-induced, VacA toxin in human gastric epithelial cells, effect of acidic extracellular pH, **292**, 167
- Internal ribosomal entry site  
translational initiation directed by, enhancement by continuous heat shock, **297**, 224
- Intervertebral disc cells  
matrix protein gene expression in response to altered osmolarity, **293**, 932
- Interviews  
Wan Kyoo Cho, **297**, 1071  
Eugene Kennedy, **294**, 519  
Thomas D. Pollard, **297**, 6  
John E. Walker, **298**, 1  
Frank Westheimer, **296**, 5
- Intestinal cancer cells  
CYP3A4 induction by liganded vitamin D receptor via DR3 and ER6 vitamin D responsive elements, **299**, 730
- Intestinal cells  
transcriptional regulation of rat Mrp3 promoter (IEC-18 cells), **291**, 270
- Intestinal epithelial cells  
activation of transcription factors C/EBP- $\beta$  and - $\delta$  by proteasome inhibitors (Caco-2 cells), **290**, 469  
basolateral surface, dominant expression of ABCA1 stimulated by LXR/RXR ligands, **296**, 625  
p53-p21<sup>WAF</sup> Bcl-2 network in, role of Cdx1 homeobox gene, **297**, 607
- Intestinal metaplasia  
gastric mucosa conversion to, in Cdx2-expressing transgenic mice, **294**, 470
- Intestine  
N-acetylglutamate synthase expression (human), **299**, 581  
basolateral peptide transporter, identification of candidate membrane protein for, **296**, 918  
caveolae membrane fraction, detection of specific binding protein/receptor for 1 $\alpha$ ,25-dihydroxyvitamin D<sub>3</sub>, **298**, 414  
cholesterol uptake, regulation by biliary anionic peptide fraction and ApoA-I, **292**, 390  
maltase-glucoamylase, partial characterization (mouse), **295**, 394  
metabolism and absorption of cholecystokinin analogs (rat), **292**, 632  
MUC17 expression, **291**, 466
- Intracellular trafficking  
exogenous DNA delivered by cationic liposomes, visualization, **298**, 591
- Intraocular pressure  
elevated, effects on expression of optineurin, **298**, 67
- Intron recognition  
plant pre-mRNA splicing in *Schizosaccharomyces pombe*, **293**, 1209
- Inverted repeats  
dimerization of v-erbA on, **294**, 35  
imperfect, in cyanobacterial small heat-shock protein gene, specific binding of protein to, **297**, 616
- In vitro selection  
improvement of RNA aptamer activity against myasthenic auto-antibodies, **290**, 656
- Iodothyronine deiodinase  
type 2, expression in primary osteoblastic cells, and possible role in T<sub>4</sub>-enhanced osteoclast formation, **291**, 987
- Ion homeostasis  
in *Saccharomyces cerevisiae* *trk1 $\delta$ trk2 $\delta$*  mutant cells, dual effect of SKY1 and PTK2 deletions, **295**, 1142
- Ionizing radiation  
induced lymphocyte apoptosis, associated DNA fragmentation and morphological changes (human), **294**, 872  
upregulation of peroxiredoxin I and II in testis (mouse), **296**, 337
- Ionomycin  
activation of Ras-like small GTP-binding protein Rin, **295**, 651  
induction of p35 cleavage to p25 and tau dephosphorylation, **298**, 693
- Ions  
forced vibration, as mechanism for action of electromagnetic fields on cells, **298**, 95
- Iontophoresis  
antisense oligonucleotide for NOSII, downregulation of NOSII gene expression in endotoxin-induced uveitis, **295**, 336
- IP-10  
expression in penis cavernous tissue and cultured smooth muscle cells, induction by VEGF (rat), **292**, 79
- IRE1  
identification as multicopy suppressor of *sec12-4* mutant, **296**, 560
- Iron  
cytochrome *b*<sub>558</sub> ferric/cupric reductase acting on, from rabbit duodenal brush border membranes, characterization, **291**, 220  
Fe(III), nucleotide-independent binding site, localization on mitochondrial F<sub>1</sub>-ATPase  $\beta$  subunit, **297**, 587  
and oxygen, in insects: Konrad Bloch special issue, **292**, 1191  
role in alkylitaconate effect on cellulolytic active oxygen species hydroxyl radical production (*Ceriporiopsis subvermispota*), **297**, 918  
uptake by divalent metal transporter 1 in yeast and mammalian cells, **295**, 978
- Iron regulatory protein-1  
modulation by various metals, **290**, 213
- IRS-1  
levels in adipocytes, decrease after chronic insulin treatment, prevention by rapamycin, **293**, 1021  
tyrosine phosphorylation in adipocytes, regulation by proteasome inhibitors, **296**, 1257



- IRSp53  
interaction with Rac, regulation by WAVE2, **293**, 93
- Ischemia  
angiogenesis in response to, regulation by aging suppressor gene *klotho*, **293**, 332  
astrocytes under, Erk1/2 and Akt activation in, **294**, 726  
cerebral, injury from, protection by recombinant adenoviral expression of dominant negative I $\kappa$ B $\alpha$ , **299**, 14  
heat shock response in rat heart in response to, effect of hyperlipidemia due to high-cholesterol diet, **290**, 1535  
myocardial, acute: post ischemia Ca<sup>2+</sup>/calmodulin-dependent protein kinase II dynamics (rat), **297**, 997
- Ischemia–reperfusion  
hepatic injury induced by, inhibition by antisense oligonucleotide for tissue factor, **297**, 433  
matrix metalloproteinase-2 release and activation induced by, decrease by preconditioning, **296**, 937  
renal, global gene expression in, **291**, 787
- Ischemic cardiomyopathy  
role of cardiac ankyrin repeat protein augmentation (human), **293**, 1377
- Islet-neogenesis-associated protein  
enhancement of neurite outgrowth from dorsal root ganglia neurons, **291**, 649
- Islets of Langerhans, *see* Pancreatic islet cells; Pancreatic islets
- Isocitrate dehydrogenase (NADP<sup>+</sup>)  
cytosolic, defense of cell against UVB-induced phototoxicity, **292**, 542
- Isoflavones  
regulation of interleukin-6 and osteoprotegerin synthesis during osteoblast differentiation via estrogen receptor-dependent pathway, **295**, 417
- Isoleucine  
role of Ile (476) of di-leucine-based motif in localization of LGP85/ LIMP II to endocytic organelles, **295**, 149
- Isopentenyl diphosphate isomerase  
inhibition by bisphosphonate NE21650, **290**, 869
- Isoprene  
release, fluctuations during *Bacillus subtilis* growth, and isoprene synthase activity, **294**, 71
- Isoprene synthase  
activity, and fluctuations of isoprene release during *Bacillus subtilis* growth, **294**, 71
- Isoprenoid chain  
role in ubiquinol inhibition of Mg<sup>2+</sup>-dependent neutral sphingomyelinase in liver plasma membrane, **297**, 581
- Isoprostanes  
phosphatidylcholine, hydrolysis to lysophosphatidylcholine by paraoxonase-1, **290**, 391
- Isoproterenol  
Na<sup>+</sup>/Ca<sup>2+</sup> exchanger current response in acutely isolated and short-term cultured adult ventricular myocytes, **297**, 302
- Isotope labeling  
uniform <sup>13</sup>C and <sup>15</sup>N, of DNA for NMR studies, **290**, 928
- ITAM  
DAP12, regulation of differentiation and apoptosis in M1 leukemia cells, **291**, 296  
SPAP2 containing, cloning and characterization, **293**, 1037
- ITIM  
PECAM-1, tyrosine nitration of, abrogation of phosphorylation and SHP-2 binding, **296**, 1171  
SPAP2 containing, cloning and characterization, **293**, 1037
- J
- JAK2  
hyperactive signaling, effects in mammary epithelial cells, **296**, 139
- JAK-STAT pathway  
role in effects of IFN- $\gamma$  on HIV-1 replication in latently infected cells, **291**, 890
- Jasmonic acid  
burst in rice seedling leaves upon wounding by cut and chitosan treatment, **295**, 1041
- jerker  
genetic and physical maps on mouse chromosome 4, **296**, 1143
- JNK, *see* c-Jun N-terminal kinase
- JTE-013  
enhancement of sphingosine 1-phosphate-induced migration of vascular endothelial and smooth muscle cells, **299**, 483
- JUNB  
mRNA expression, induction by tissue factor pathway inhibitor, **299**, 847
- Junctophilin  
type 3, mutant mice lacking, motor discoordination in, **292**, 318
- JunD  
JunD–DNA binding, induction by LH-RH in human ovarian cancer cells, **294**, 11
- Jun kinase  
phosphorylation, relationship to breast carcinoma apoptosis (MCF-7 cells), **297**, 943
- Jurkat cells  
apoptosis, induction by L-canavanine via caspase-3 activation regulated by Bcl-2 or Bcl-xL, **295**, 283  
calpain II colocalization with detergent-insoluble rafts, **295**, 540  
growth suppression by *N*-coumaroyltyramine via protein-tyrosine kinase inhibition, **292**, 1104  
L-selectin-induced activation of NFAT in, mechanisms, **291**, 237
- K
- K7, *see* Keratin 7
- Kainic acid  
transient induction of *rgpr85* encoding rat G protein-coupled receptor in adult brain, **298**, 613
- Kallikrein  
glandular, locus in *Mus musculus*, organization and evolution, **299**, 305  
plasma, selectivity for, of Kunitz trypsin inhibitor with one disulfide bridge purified from *Swartzia pickellii*, **291**, 635
- Kanamycin  
induction of pH-sensitive activation of calcium-sensing receptor, **297**, 71
- Kasugamycin  
inhibition of 30S and 70S translation initiation complexes on leaderless mRNA, **297**, 1021
- KB-R7943  
and cold mannitol, synergistic effect on blood–brain barrier opening, **291**, 669
- Kch  
functional properties, **297**, 10
- KchIP2b  
modulation of kinetic properties of Kv4.3, **295**, 223
- KCNQ1  
truncated splice variant cloned from heart (rat), **294**, 199
- KEM1  
yeast *OSH3* effect on nuclear fusion in *kem1*-specific manner, **293**, 733
- Kennedy, Eugene  
interview, **294**, 519
- Keratin  
degradation, isolation of enzymes responsible and mechanism (*Stenotrophomonas* sp.), **294**, 1138; *erratum*, **295**, 1034
- Keratin 7  
cloning and mouse expression (human, murine, marsupial), **297**, 818

## Keratinocyte growth factor

gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482

## Keratinocyte growth factor receptor

gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482

## Keratinocytes

adhesion, migration, and proliferation, support by  $\beta$ ig-h3 through  $\alpha$ 3 $\beta$ 1 integrin, **294**, 940

biomarkers identified using DermArray DNA arrays and bioinformatics methods (human), **291**, 1052

cytochrome P450 1A1 negative regulatory element, nuclear protein binding to, specificity of, **296**, 799

cytochrome P450 expression in vitro (rat), **297**, 65

differentiation, cytoskeletal association of ErbB1 and ErbB2 during, **295**, 1108

## epidermal

identification of SDR family member *hRDH-E2* with increased expression in psoriatic lesion, **297**, 1171

normal, functional vanilloid receptors in, **291**, 124

phospholipase B expression (human), **295**, 362

expression of melanin-concentrating hormone binding site different from MCH<sub>1</sub> or MCH<sub>2</sub> receptor (SVK14 cells), **295**, 841

stem cell factor expression on, role of mast cell chymase, **290**, 1478

subcellular localization of  $\beta$ -catenin in, regulation by cell density (HaCaT cells), **292**, 195

sulfur mustard-induced arachidonic acid release, mediation by phospholipase D (human), **295**, 1062

transformed, MMP-9 production, modulation by TGF- $\beta$ 1 via Ras/MAPK signaling pathway, **296**, 267

UVB-enhanced IL-18 production, role of ROI and AP-1 signaling (HaCaT cells), **298**, 289

 $\alpha$ -Ketoisocaproic acid

effects on glucose uptake by skeletal muscle (rat), **299**, 693

## 3-Ketosteroid reductase

HSD3b5 and HSD3b4, effects of peroxisome proliferator di(2-ethyl-hexyl)phthalate, **293**, 549

## KIAA0380

PDZ domain-containing Rho guanine nucleotide exchange factor homologous to, interaction with plexin-B1, **297**, 32

## Kidney

aquaporin-2 transcript expression in Sprague-Dawley and Dahl SS/Jr rats, **296**, 755

differentially expressed genes in spontaneously hypertensive and Wistar-Kyoto rats from two sources, **296**, 537

## epithelial cells

hypotonicity-induced ENaC translocation in, calmodulin-dependent regulation (A6 cells), **298**, 619

Na<sup>+</sup>,K<sup>+</sup>-ATPase translocation in, induction by Rho small GTPase, **297**, 1231

failure, progression of, role of dietary phosphorus, **295**, 917

Fly-like putative transporters homologous to *Drosophila Orct* and mammalian OCTNs (human), **297**, 1159

global analysis of differentially expressed genes during progression of calcium oxalate nephrolithiasis, **296**, 544

ischemia-reperfusion, associated global gene expression (mouse), **291**, 787

S100A5 expression, **291**, 623

streptozotocin-diabetic mouse, Smad pathway activation, **296**, 1356

*Urb* gene expression in bombesin receptor subtype-3-deficient mice, **290**, 1282

## Kidney cells

apical secretion of serpins independently of raft association (MDCK cells), **299**, 35

calcitonin induction of uPA and NF-IL3A, and dependence of uPA induction on Erk1/2 phosphorylation, **290**, 1483

cell cycle rate and apoptosis, effects of CIP29 overexpression (HEK cells), **292**, 593

dopamine uptake and cell surface expression of dopamine transporters, effects of cocaine (HEK 293 cells), **290**, 1545

ectodomain shedding of nectin-1 $\alpha$  in, induction by SF/HGF and TPA (MDCK cells), **299**, 472

endogenous progesterone receptor, coactivation by TIF2 (COS-7 cells), **295**, 469

EP2 receptor-expressing, adenylyl cyclase activity, effect of prostaglandin EP3 receptor (COS-7 cells), **290**, 162

expression of full-length cDNA encoding inositol 1,4,5-trisphosphate 3-kinase B (COS-7 cells), **291**, 400

gene silencing by preformed small RNA duplexes (HEK cells), **295**, 744

glomerular podocytes, high-glucose-induced VEGF expression via PKC and ERK, **290**, 177

hypertensive rat proximal tubule cells, Mg<sup>2+</sup> influx, enhancement by nitric oxide, **294**, 710

hypocretin receptor 2-transfected, hypocretin stimulation of [<sup>35</sup>S]GTP $\gamma$ S binding (HEK-293 cells), **294**, 615

lead and iron uptake by divalent metal transporter 1 (HEK293 cells), **295**, 978

living, nuclear translocation of SHP and visualization of interaction with HNF-4 $\alpha$  (COS-7 cells), **292**, 8

mesangial, *see* Mesangial cells

mutually exclusive  $\gamma$ -secretase-like cleavages of Notch and  $\beta$ APP (HEK293 cells), **290**, 1408

nucleic acid delivery by anthrax toxin (COS-1 cells), **297**, 1121

plasma membrane anion channels, overexpressed CLIC4 as essential component (HEK-293 cells), **297**, 317

Pmr1-GFP-expressing, with functional endoplasmic reticulum, Ca<sup>2+</sup> signals (COS-1 cells), **294**, 249

protein kinase C $\theta$  regulation of protein kinase D (COS-7 cells), **291**, 444

sodium current, modulation by epilepsy-correlated  $\beta$ 1-subunit mutation (HEK cells), **291**, 1095

targeting of focal adhesion kinase amino-terminal domain (HEK 293, MDCK cells), **299**, 62

trafficking of group I metabotropic glutamate receptor in, N-terminal sequence specific for Homer1 isoform controlling, **296**, 523

Zfhep transcription factor phosphorylation (COS-7 cells), **296**, 368

## Kinases

circadian regulatory pathway components, expression by immortalized suprachiasmatic nucleus cells, **292**, 20

and neuritogenesis, **294**, 923

## Kinetics

C-terminally truncated RNA-dependent RNA polymerase of hepatitis C virus, **290**, 1188; *erratum*, **296**, 227

cyanide binding to heme-regulated phosphodiesterase, effect of Met95 mutations (*Escherichia coli*), **299**, 169

dynamic and biphasic modulation of nitrosation by superoxide dismutases, **295**, 1125

guanine nucleotide binding and hydrolysis by Cdc42, effects of Mg<sup>2+</sup>, **297**, 653

heparan sulfate 3-O-sulfotransferase-1 (human), **290**, 1206

interfacial enzymatic catalysis, analysis by differential scanning calorimetry, **297**, 446

Kv4.3, modulation by KchIP2b, **295**, 223

NADPH-cytochrome P450 reductase from *Phanerochaete chrysosporium*, **299**, 189

nitric oxide binding to R-state hemoglobin, **292**, 812

6-phosphofructo-1-kinase, effects of C-terminal modification (*Saccharomyces cerevisiae*), **295**, 992

primer mismatches in allele-specific PCR, **299**, 715

real-time PCR, quantitative method for, validation, **294**, 347

- SFTI-1 trypsin inhibitor isolated from sunflower seeds and analogues, **292**, 855
- E-Kinin  
release from kininogens by human neutrophil elastase, **294**, 423
- Kininogens  
vascular permeability enhancing peptide from, release by human neutrophil elastase, **294**, 423
- Kir6.2  
interaction with nucleotide-binding folds of sulfonylurea receptor, **294**, 191
- Kir6.x  
identification as subunit in ATP-sensitive K<sup>+</sup> channels in vascular smooth muscle cells (rat), **296**, 463
- Klenow fragment  
Klenow exo<sup>-</sup> traversal through G–G:C triplex, mechanism: Klenow exo<sup>+</sup> block at G–G hairpin, **295**, 730
- Klinefelter's syndrome  
specific mitochondrial DNA polymorphism in, **297**, 341
- klotho* gene  
regulation of angiogenesis, **293**, 332
- KLPMR1*  
cell surface expression of GPI-anchored mouse acetylcholinesterase in *Klpmr1Δ* cells of *Kluyveromyces lactis*, **298**, 559
- Kluyveromyces lactis*  
*Klpmr1Δ* cells, cell surface expression of GPI-anchored form of mouse acetylcholinesterase, **298**, 559
- Kluyveromyces marxianus* IMB3  
degradation of iminodiacetate and nitrilotriacetate, **290**, 802
- KLFFF recognition element  
and flexible hydrophilic disrupting element, inhibitors of β-amyloid peptide fibril formation and cytotoxicity composed of, **290**, 121
- Krüppel-associated box  
related gene *ZNF382*, expression in human heart, **299**, 606  
*ZNF304* with, identification by AU-motif-directed display and characterization in lymphocyte activation, **293**, 1066
- Krüppel-like zinc-finger gene  
*ZNF382*, expression in human heart, **299**, 606
- Krüppel transcription factors  
cross-talk in regulation of ovine FSH receptor gene, **295**, 1096
- Ku80  
*xrs5* cells deficient in, X-ray-induced apoptosis, suppression by power frequency magnetic fields, **292**, 355
- Kunitz domain  
first, mouse hepatocyte growth factor activator inhibitor type 2 lacking, inhibition of HGF activator, **290**, 1096
- Kunitz trypsin inhibitor  
with one disulfide bridge, purified from *Swartzia pickellii*, characterization, **291**, 635
- Kupffer cells  
ethanol-fed rats, acetaldehyde-induced TNF-α generation in, reduction by dilinoleoylphosphatidylcholine, **299**, 459  
LPS-induced TNF-α generation in ethanol-fed rats, decrease by dilinoleoylphosphatidylcholine, MAPK and NF-κB roles, **294**, 849
- Kurtosin-like peptides  
KLI and KLII scorpion toxins, targeting of voltage-gated Ca<sup>2+</sup> and Na<sup>+</sup> channels, **299**, 562
- Kv1.3  
role in actinomycin D-induced apoptosis, **295**, 526
- Kv4.3  
kinetic properties, modulation by KchIP2b, **295**, 223
- L
- Lac<sup>+</sup>/Lac<sup>-</sup> selection  
recombinant plasmids, limitations of, **298**, 37
- Lac repressor  
Lac1, SELDI mass spectrometry, **290**, 1328
- Lactacystin  
activation of transcription factors C/EBP-β and -δ in human intestinal epithelial cells, **290**, 469  
regulation of tyrosine phosphorylation of IRS-1 and insulin signaling in adipocytes, **296**, 1257
- α-Lactalbumin  
modulation of acceptor and donor specificity of β-1,4-galactosyltransferase, **291**, 1113
- β-Lactamase  
sorting to regulated secretory pathway by insertion of dibasic residues, **290**, 191
- β-Lactams  
depolarization of membrane potential: induction of cell wall autolysis, **290**, 1169
- Lactase-phlorizin hydrolase  
promoter, cis-element, interaction with Cdx-2 at, **299**, 587
- D-Lactate  
transport by L-lactate permease and glycolate permease (*Escherichia coli*), **290**, 824
- L-Lactate  
transport by L-lactate permease and glycolate permease (*Escherichia coli*), **290**, 824
- D-Lactate dehydrogenase  
putative mammalian enzymes, identification, **295**, 910
- L-Lactate permease  
transport of L-lactate, D-lactate, and glycolate (*Escherichia coli*), **290**, 824
- Lactation  
and endothelin-1 and vasoactive intestinal contractor/ET-2 expression in mammary gland (mouse), **297**, 1339  
resistin and RELM-α gene expression in white adipose tissue during, analysis (mouse), **296**, 458
- Lactoferrin  
human, activation of IL-1β gene transcription in mammalian cells, **290**, 236  
reduction of in vitro osteoclast differentiation and resorbing activity, **296**, 261  
region promoting collagen gel contractile activity of human fibroblasts, identification (bovine), **299**, 813
- Lactose synthase  
and β-1,4-galactosyltransferase, as molecular mechanical device, **291**, 1113
- Lactosylceramide  
modulation of apolipoprotein E levels in macrophages and cholesterol-loaded foam cells, **290**, 1361
- LacZα  
recombinant plasmids based on, selection by Lac<sup>+</sup>/Lac<sup>-</sup> colony phenotype detection, limitations of, **298**, 37
- Laforin  
subcellular localization, modulation by alternative splicing, **291**, 1134
- Lamellipodia  
*rac*-dependent formation, requirement of intact vinculin protein for, **290**, 749
- Lamin  
expression in *LMNA*-deficient mice, **291**, 522
- Lamina-associated polypeptide 1s  
isotype of, molecular cloning and topological analysis using deletion mutants (human), **294**, 770
- Lamin B receptor  
nucleoplasmic tail, three-residue nuclear localization signal for inner nuclear membrane, **291**, 966
- Laminin  
α4 subunit, splice variants, identification and recombinant production (human), **299**, 498



- Laminin-5  
vascular smooth muscle cell adhesion to  
enhancement of PDGF-BB-stimulated proliferation and migration via ERK1/2 signaling, **293**, 1000  
and expression, PDGF-BB effects, **294**, 1017
- Laminin-10/11  
A549 cell migration on, role of matrix metalloproteinase-2, **296**, 73
- Langat virus  
NS3 protease, cleavage of serine protease substrates, **294**, 16
- Lanosterol  
cholesterol synthesis from, membrane-bound enzymes of, Konrad Bloch special issue, **292**, 1139
- LARG  
PDZ domain-containing Rho guanine nucleotide exchange factor homologous to, interaction with plexin-B1, **297**, 32
- Large T antigen  
simian virus 40, cells immortalized by, calpain relationship to MMP-2 and u-PA expression in, **297**, 294
- Laryngeal cancer cells  
apoptosis, induction by H-ras ribozyme-encoding recombinant adenovirus via caspase- and mitochondria-dependent pathways, **298**, 805
- Laser microdissection  
single cells isolated by, gene expression analysis: CCK<sub>2</sub> receptor mRNA expression by rat parietal cells, **297**, 335
- LAT  
role in platelet signaling induced by collagen, thromboxane A<sub>2</sub>, or ADP, **292**, 916
- Latent infection  
HIV-1 replication in cells with, inhibitory effects of IFN- $\gamma$ , **291**, 890
- Latent membrane protein 1  
Epstein-Barr virus, potent phosphorylation by protein kinase CK2, **294**, 586
- Lateral gene transfer  
arylamine *N*-acetyltransferases from bacteria to vertebrates, absence of evidence, **293**, 783
- Lathosterol 5-desaturase  
supernatant protein and, Konrad Bloch special issue, **292**, 1293
- LC3 processing  
effects of mammalian Apg12p and Apg12p·Apg5p conjugate, **296**, 1164
- Lead  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653  
uptake by divalent metal transporter 1 in yeast and mammalian cells, **295**, 978
- Leaves  
wounding by cut and treatment with chitosan, associated octadecanoid signaling component burst (rice), **295**, 1041
- Leber's hereditary optic neuropathy  
patients lacking the most common pathogenic mutations, sequence analysis of complete mitochondrial genome in, **295**, 342
- Lecithin:cholesterol acyltransferase  
detoxification of oxidized LDL by transfer of oxidation product(s) to, **291**, 758  
integrity and function, protection by paraoxonase 1 overexpression, **290**, 921
- Lecithin-retinol acyltransferase  
membrane-bound, Konrad Bloch special issue, **292**, 1243
- Lectin  
DBA, as marker for staining and purification of embryonic pancreatic epithelium, **293**, 691
- Lectin domain  
function in *N*-acetylgalactosaminyltransferase 1, **298**, 755
- Lens  
 $\alpha$ A-crystallin, decreased subunit exchange after heat treatment, **293**, 7
- membrane fractions containing steroid binding protein, immunomagnetic capture, **295**, 1027
- Lens epithelial cells  
 $\alpha$ B-crystallin expression, induction by inhibition of Rho-kinase, **294**, 981
- Leptin  
decrease after intracerebroventricular interleukin-6 treatment (rat), **293**, 560  
effect on stearoyl-CoA desaturase, **297**, 1259  
effect on TGF- $\beta$  in type I collagen formation (LX-1 cells), **297**, 906  
expression and secretion in cultured adipocytes, effects of  $\beta$ 3-adrenergic agonist (rat), **291**, 1201  
gene expression in white adipose tissue of lactating mice, **296**, 458  
improvement of erythrocyte membrane fluidity via NO-dependent mechanism, EPR study (human), **297**, 672  
induction of IL-1 receptor antagonist expression in brain, **294**, 215  
internalization by human placental choriocarcinoma BeWo cells, stimulation by arachidonic acid, **299**, 432  
mediation of proliferative response in breast cancer MCF-7 cells, **293**, 622  
plasma levels, inverse correlation with circulating levels of ghrelin (rat), **292**, 1031  
prevention of fall in plasma osteocalcin during starvation of male mice, **295**, 475  
production by adipocytes in myostatin knockout mouse, **291**, 701  
regulation of natural killer cell development and activation, **298**, 297
- Leptin receptors  
detection in autonomic neurons supplying fat depots (pig), **293**, 1138  
expression in brain, relationship to obesity in bilateral ovariectomized rat, **290**, 1349  
expression in breast cancer MCF-7 cells, **293**, 622  
mice deficient in, impaired natural killer cell activity: leptin role in NK cell development and activation, **298**, 297  
neurons with, distribution in hypothalamus (pig), **298**, 333  
soluble, isoforms in non-pregnant and pregnant mice, **298**, 798
- Leptin resistance  
hypothalamic, in aged rat, mediation by SOCS-3, **296**, 425
- Leptospira interrogans*  
peptide deformylase from, enzymatic properties, **295**, 884
- Leucine  
promotion of glucose uptake in skeletal muscle (rat), **299**, 693  
stimulation of secretion of hepatocyte growth factor by hepatic stellate cells, **297**, 1108
- Leucine aminopeptidase/oxytocinase  
human placental, gene transcription regulation by AP-2 and Ikaros, **290**, 1048
- Leucine-rich repeat superfamily  
 $\beta$ -amyloid-induced member of, identification in astrocytes (rat), **290**, 756
- Leucine zipper domain  
HIV-1 gp41, interaction with  $\alpha$ -catenin, **291**, 1239
- Leucine zipper and sterile- $\alpha$  motif kinase  
MKK7-utilizing, activation of c-Jun N-terminal kinase and role in cell arrest, **297**, 105
- Leucocin C  
complete amino acid sequence, **295**, 826
- Leuconostoc mesenteroides*  
leucocin C, complete amino acid sequence, **295**, 826
- Leucyl-tRNA synthetase  
 $\beta$  subunit, role in cognate tRNA recognition (*Aquifex aeolicus*), **297**, 950
- Leu-enkephalin  
 $\beta$ -turn, structural similarity to endomorphin analogue incorporating 1-aminocyclohexane-1-carboxylic acid for proline, **297**, 138
- Leukemia  
acquired resistance to 9- $\beta$ -D-arabinofuranosylguanine, role of low mitochondrial deoxyguanosine kinase level, **293**, 1489

## Leukemia cells

- 9- $\beta$ -D-arabinofuranosylguanosine-resistant, resistance to Fas- and mitochondria-mediated apoptosis (human), **298**, 338
- cytokine-inducible protein CIP29 in, regulation (UT-7/Epo cells), **292**, 593

differentiation and apoptosis in, regulation by DAP12 ITAM motif (M1 cells), **291**, 296

gene expression patterns during glucocorticoid-induced apoptosis, analysis using oligonucleotide arrays (697 cells), **293**, 1254

myelomonocytic differentiation, deoxyribonuclease II gene upregulation during (HL-60, THP-1 cells), **296**, 48

## Leukemia inhibitory factor

relaxation of arteries by endothelium-dependent mechanism, **294**, 359

## Leukocytes

in blood, apoptosis by cytosine arabinoside, effects of p53 codon 72 genotype, **299**, 539

interactions with platelets, induction by thrombopoietin, **292**, 987; brief commentary, **299**, 343

phospholipase C- $\beta$ 2 interaction with mitogen-activated protein kinase kinase 3, **293**, 647

sphingosine kinase-dependent directional migration, effect of phorbol ester (human), **297**, 806

subpopulations, distribution of TT virus, **290**, 242

Leukotriene B<sub>4</sub>

effect on Fc $\epsilon$ RI expression in human basophilic KU812 cells, **297**, 193

## Leukotrienes

degradation, peroxisomal  $\beta$ -oxidation enzymes involved in, identification, **293**, 269

## Leydig cells

peroxiredoxin I and II expression and upregulation by radiation (mouse), **296**, 337

## LGP85

Ile (476) of di-leucine sorting motif of, role in localization to endocytic organelles, **295**, 149

## Lib

in astrocytes, identification as  $\beta$ -amyloid-induced member of leucine-rich repeat superfamily (rat), **290**, 756

## Life span

cellular, regulatory role of mitochondria, **294**, 245

replicative, of macaque cells, role of somatic mutations in p53, **295**, 644

## Ligand-immunofunctional assay

soluble leptin receptor isoforms in non-pregnant and pregnant mice, **298**, 798

## Light

red and blue, modulation of glycine-rich RNA-binding protein mRNA expression of *Sorghum bicolor*, **296**, 1063

## Lignin peroxidase

oxidations promoted by, mediation of veratryl alcohol: lifetime of VA radical cation, **293**, 832

## Limb development

regulation of *Msx2* expression in apical ectodermal ridge by *Msx2* and *Dlx5* binding site, **290**, 955

## Limbic system

seizures, and delayed hippocampal damage, triggering by abnormal expression of neuronal nitric oxide synthase (rat), **291**, 255

## LIMB proteins

Hic-5, transcriptional activation of *c-fos*, **299**, 360

## LIM-kinase 1

gene regulation by ceramide in renal mesangial cells, **298**, 408

mitosis-dependent phosphorylation and activation, **290**, 1315

## LIMP II

Ile (476) of di-leucine sorting motif of, role in localization to endocytic organelles, **295**, 149

## Linear dichroism

MLD, and MCD, visible region, of nitrosylferrohemoglobin and oxyhemoglobin, **297**, 220

## Linoleic acid

and mechanism of hemozoin synthesis by malaria parasite, **290**, 595

## Lipase

hepatic, gene expression in hepatocytes and/or macrophages, effect of testosterone, **296**, 1051

hormone-sensitive, role in cholesteryl ester hydrolysis in macrophages, **292**, 900

testicular hormone-sensitive, characterization of novel form (human), **291**, 286

## Lipid amphiphiles

solubility in membranes, effects of phase properties and head group, **296**, 596

## Lipid-binding domain

major, of talin, membrane fusion induced by, **295**, 636

## Lipid hydroperoxides

reduction by thioredoxin reductase in biomembranes, correlation with sparing of  $\alpha$ -tocopherol, **292**, 45

## Lipid kinases

stimulation in *Trypanosoma cruzi* by synthetic peptide carrying residues 1–40 of chicken  $\alpha^D$ -globin, **293**, 314

## Lipid oxidation

oxidation products of phospholipid-containing  $\delta$ -9 fatty acids impairing activity of tissue factor pathway inhibitor, **298**, 468

## Lipid peroxidation

AMPA-induced, in hippocampal neurons, reduction by (–)-epigallocatechin gallate, **290**, 1506

effect of creatine, **290**, 47

high-density lipoproteins in mouse, effect of overexpression of paraoxonase 1, **290**, 921

inhibition, and one-electron oxidation of photo-Fenton reagents, **299**, 155

in vitro, effect of antioxidant cocktail EM-X, **296**, 1148

## Lipid phosphatase

activity of myotubularin family members hMTM1, hMTMR2, and hMTMR3, **291**, 305

## Lipid rafts

caveolin 1 translocation in, induction by IGF-I, **295**, 1085

detergent-insoluble, calpain II colocalization with, in human and Jurkat T cells, **295**, 540

in Fas-induced apoptosis, role of death-inducing signaling complex (human), **297**, 876

isolated from mouse brain, association of tenascins with, **294**, 742

with phosphatidylcholine/sphingomyelin bilayers, synergistic perturbation by diacylglycerol and cholesterol, **296**, 806

presence in lysosomal membranes, **298**, 5

targeting of protein-tyrosine phosphatases to, and interaction of PTPs with caveolin-1, **296**, 692

## Lipids

cellular, LDL apolipoprotein-mediated efflux, **291**, 727

Konrad Bloch's influence on students' careers, **292**, 1255, 1279

modifications by dietary coenzyme Q10: non-antioxidant mechanism for CoQ anti-atherogenic effects, **296**, 255

polymorphism: Konrad Bloch special issue, **292**, 1201

transport and oxidation, genes for, role in activation of UCP3 gene expression in skeletal muscle by fasting, **294**, 301

## Lipid transfer protein-2

7-kDa nonspecific, purification and characterization from rice, **294**, 535

## Lipid vesicles

small unilamellar, of uniform size, preparation and analysis, **296**, 1352

Lipocortin, *see* Annexin

## Lipogenic genes

upregulation in skeletal muscle after exercise training, **296**, 395

## Lipolysis

adipocyte, enhancement in exercise-trained rats, mechanisms, **295**, 236



- stimulation by azaftig in rodent and human adipocytes in vitro, **293**, 847
- Lipopeptide  
for delivery of antisense oligonucleotides to targeted cells, **293**, 18
- Lipopolysaccharide  
activation of ERK1/2 and JNK1/2 in monocytes, effects of hepatitis B surface antigen, **297**, 486  
alveolar macrophage activation induced by, inhibition by high concentrations of LPS-binding protein, **295**, 553  
apoptosis signal mediated by, inhibition in M1 leukemia cells with mutation at DAPI2 ITAM motif, **291**, 296  
blood stimulated with, cultured from healthy individuals, TNF- $\alpha$  production in, **292**, 538  
effect on hepatic mRNA profiles, **290**, 518  
*Helicobacter pylori*, disruption of gastric mucin synthesis, role of ERK and p38 MAP kinase, **294**, 220  
interleukin-1 $\beta$  biosynthesis mediated by, attenuation in alveolar epithelial cells by NF- $\kappa$ B blockade, **293**, 252  
interleukin-1 $\beta$  processing induced by, promotion by Nod1, **299**, 652  
interleukin-6 biosynthesis mediated by, NF- $\kappa$ B-independent regulation, **291**, 1045  
MD-2 peptide fragment binding to, identification, **292**, 880  
microglia activated by, MEKK1/MKK4/JNK cascade in, effects of VIP and PACAP, **293**, 771  
MRI signals in lung after challenge with, correlation with inflammation parameters in BAL (rat), **292**, 216  
neutrophil accumulation in mouse lung induced by, enhancement by DEX, role of CXC chemokines, **294**, 1101  
NF- $\kappa$ B activation and apoptosis in endothelial cells induced by, role of TIRAP, **295**, 157  
*Porphyromonas gingivalis*, cellular responses associated with salivary mucin synthesis, **297**, 1149  
retinoic acid-inducible gene I induction by and regulation of COX-2 expression in endothelial cells, **292**, 274  
ST2 protein induced by, modulation of acute lung inflammation, **299**, 18  
synthesis, mutation in *Xanthomonas campestris xanA* gene required for, and phage L7 adsorption efficiency, **291**, 338  
TNF- $\alpha$  generation induced by, decrease in Kupffer cells of ethanol-fed rats by dilinoleoylphosphatidylcholine, roles of MAPK and NF- $\kappa$ B, **294**, 849  
uveitis induced by, NOSII gene expression in, downregulation by iontophoresis of antisense oligonucleotide, **295**, 336
- Lipopolysaccharide binding protein  
high concentrations, inhibition of LPS-induced activation of alveolar macrophages, **295**, 553
- Lipoproteins  
remnant particles, uptake into myocardium through VLDL receptor, **293**, 1007
- Liposomes  
cationic  
complex with plasmids, induction of cytokine secretion in macrophages in CpG motif-independent manner, **293**, 344  
intracellular trafficking of exogenous DNA delivered by, visualization, **298**, 591  
pH-sensitive  
delivery of endoplasmic reticulum-targeted drugs to melanoma cells, **293**, 918  
encapsulated with K<sup>b</sup>-restricted CTL epitope, in vivo antigen delivery route and immune boosting effects, **292**, 682
- Lipoxin precursors  
endogenous, from arachidonate, anti-inflammatory effects in human neutrophils, **290**, 219
- 5-Lipoxygenase  
Ca<sup>2+</sup> dependence, conferral by monocyte-derived soluble protein, **295**, 985  
interaction with mouse coactosin-like protein, **290**, 783
- Lipoxygenase inhibitors  
induction of apoptosis in breast cancer cells, mechanisms, **296**, 942
- Lipram  
promotion of ABCA1 expression and cholesterol efflux, **290**, 663
- Liquid chromatography tandem mass spectrometry  
assay of octadecanoid signaling component burst in rice seedling leaves upon wounding by cut and chitosan treatment, **295**, 1041
- Lithium  
and beryllium, inhibition of glycogen synthase kinase-3: two magnesium-binding sites, **290**, 967
- Lithium chloride  
with tacrine, enhancement of nNOS expression triggering limbic seizures and hippocampal damage (rat), **291**, 255
- Lithocholic acid  
membrane-type receptor for, identification, **298**, 714
- Liver  
*N*-acetylglutamate synthase expression (human), **299**, 581  
B22956/1 MRI contrast agent transport in vitro and in vivo, role of MRP protein, **293**, 100  
CAR and PXR repression during acute phase response, associated reduction of cytochrome P450 expression (mouse), **293**, 145  
carbon tetrachloride-induced early-phase fibrogenesis, prevention by pioglitazone, **291**, 55  
cirrhosis  
and proteome analysis in hepatocellular carcinoma, **291**, 1031  
thioacetamide-induced, hepatectomy in rats with, effects on CCAAT/enhancer-binding protein, AP-1, and cyclins, **292**, 474  
*DAX1* and *SHP* expression in Nile tilapia, **297**, 632  
development, expression of sorting nexin *SNX-L* in, analysis (human), **299**, 542  
diabetic rat, selective upregulation of system A transporter mRNA, **290**, 903  
drug-induced injury, role of macrophage migration inhibitory factor, **294**, 225  
ethionine-mediated ATP depletion, hypophosphorylation of translation initiation regulators during, **298**, 235  
excretion of biliverdin isomers and C10-substituted biliverdins in bile of Mrp2-deficient (TR)<sup>-</sup> rats, **293**, 1077  
fetal human, truncated ABC transporter ABCC13 highly expressed in, **299**, 410  
gelonin uptake and intracellular fate (rat), **296**, 1180  
gene expression  
changes induced by PPAR $\alpha$  agonists, microarray analysis (mouse), **290**, 1114  
profile during bacteria-induced fulminant hepatitis, analysis by cDNA microarray system, **298**, 675  
genes expressed in, EST-based identification in adult Atlantic salmon, **293**, 578  
high-level expression of cell differentiation factor IF3 (mouse), **297**, 323  
injury and stress, mRNA profiles in, comparison of lethal and nonlethal rat models, **290**, 518  
insulin-stimulated inositol phosphoglycan generation in membranes, role of G<sub>q/11</sub> (rat), **295**, 561  
ischemia–reperfusion injury, inhibition by antisense oligonucleotide for tissue factor, **297**, 433  
and lobe, gene transfection selective for, after instillation of plasmid DNA to liver surface (mouse), **294**, 46  
manganese superoxide dismutase knockout mice specific for, for tissue-specific deletion of MnSOD gene, **296**, 729  
mannose-6-phosphate receptor expression and binding properties during perinatal development (rat), **295**, 1000  
microsomal P450 enzymes, farnesol as inhibitor and substrate (rabbit), **293**, 1  
mitochondria, dysfunction by selenite (rat), **294**, 1130  
mitochondrial citrate carrier expression, starvation-induced post-transcriptional control (rat), **299**, 418



- mitochondrial ornithine/citrulline transporter mRNA, hormonal induction, **294**, 749
- Mrp3 expression, correlation with sinusoidal efflux of taurocholate, **299**, 681
- multiple factors specific to, binding to 64-bp element and activation of apo(a) gene, **292**, 243; *erratum*, **294**, 1193
- pregnane X receptor splicing variant identification (human), **298**, 433
- pro-renin converting enzyme mK9 induction by thyroid hormone (guinea pig), **293**, 412
- R-(+)-pulegone-mediated toxicity, relevance of stereoselective hydroxylation of 4-methyl-2-cyclohexenone, **297**, 202
- Rab7 gene, upregulation by cholesterol-rich diet, **293**, 375
- regenerating, nuclear translocation of mouse Polycomb M33 protein in, **291**, 508
- regeneration
- augmentation by exogenous HGF activator via production of biologically active HGF, **290**, 475
  - survivin expression during, **297**, 59
- SCID mouse, transplantation of human cord blood somatic stem cells into,  $\beta_2$ -microglobulin downregulation after, **294**, 1052
- TCDD-responsive genes, identification by serial analysis of gene expression (mouse), **292**, 368
- ubiquinone biosynthesis in peroxisomes (rat), **291**, 1128
- Liver cells
- fibronectin promoter occupation and function, **295**, 1077
- Liver epithelial cells
- differentiation into hepatocytes, induction by coculture with hepatic stellate cells, **293**, 1420
- Liver X receptor
- ligands, dominant expression of ABCA1 on basolateral surface of Caco-2 cells stimulated by, **296**, 625
- Liver X receptor  $\alpha$
- identification as dominant regulator of CYP7A1 transcription, **293**, 338
  - oxysterol-activated LXR $\alpha$ /RXR, induction of *hSR-BI*-promoter activity in hepatoma cells and preadipocytes, **299**, 916
  - promoter activity, regulation by CCAAT/enhancer-binding proteins, **293**, 1333
- LMNA* gene
- mice deficient in, adiposity and metabolism of, characterization, **291**, 522
- Lol pI
- rye grass, homology modeling of cellulose-binding domain, **296**, 1346
- Lombricine kinase
- from echinoid worm, cloning and expression, **291**, 939
- Longitudinal growth
- fission yeast, induction by  $\beta$ -tubulin-like cDNA expressed specifically in elongating cotton fibers, **296**, 1245
- Long terminal repeat
- mouse mammary tumor virus, activity of, regulation by TEF-1 transcription factors, **296**, 1279
- Loop-mediated isothermal amplification
- products of, single-stranded DNA isolation from, **290**, 1195
- Loops
- CD11c I domain, critical for specific recognition of fibrinogen, **292**, 756
- Low-density lipoprotein
- apolipoprotein B100, amino acid composition and antioxidant status, effect of smoking, **292**, 175
  - enzymatically modified, apoptosis induction and CD36 upregulation in monocytes by, dissociation, **290**, 988
  - oxidized
    - cell death induced by, mediation by LOX-1 expressed in cultured rat chondrocytes, **299**, 91
    - components impairing function of tissue factor pathway inhibitor, **298**, 468
    - detoxification by transfer of oxidation product(s) to lecithin: cholesterol acyltransferase, **291**, 758
    - induction of p21<sup>waf1</sup> and retinoblastoma tumor suppressor protein, **293**, 1327
    - recognition and degradation in adipocytes through CD36, **295**, 319
    - stimulation of efflux of glycosphingolipids from foam cells, **290**, 1361
- Low-density lipoprotein receptor
- role in insulin suppression of VLDL apoB secretion, **297**, 134
- Low-density lipoprotein receptor-related protein
- expression in primary cultured rat astrocytes, effect of serum deprivation, **299**, 102
- Low-temperature signal
- for induction of *OLE1* transcription in yeast, Mga2p identification as sensor of, **291**, 707
- LOX-1
- expressed in cultured rat chondrocytes, mediation of oxidized LDL-induced cell death, **299**, 91
- Luciferase
- ecdysteroid responsive reporter gene assay using, for analysis of chromafenozide mode of action, **292**, 1087
- Lumican
- expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- Lung
- bleomycin-induced fibrosis, Smad3 expression in, regulation by negative feedback loop of TGF- $\beta$  signaling, **294**, 319
  - carboxyhemoglobin production, and arteriovenous COHb difference in critical illness, **299**, 479
  - circulation, adrenomedullin receptor as clearance receptor in, **294**, 315
  - gene transfer to, proteolipidic vectors for, **290**, 1489
  - inflammation
    - acute, modulation by ST2 protein induced by inflammatory stimuli, **299**, 18
    - monitored noninvasively by MRI in freely breathing rats, **292**, 216  - LPS-induced neutrophil accumulation, enhancement by DEX, role of CXC chemokines (mouse), **294**, 1101
  - Urb* gene expression in bombesin receptor subtype-3-deficient mice, **290**, 1282
- Lung cancer
- choline kinase overexpression, **296**, 580
- Lung carcinoma cells
- migration on laminin-10/11, role of matrix metalloproteinase-2 (A549 cells), **296**, 73
  - p53-deficient, H<sub>2</sub>O<sub>2</sub>-induced AP-1 activation and effect on p21<sup>WAF1/CIP1</sup>-mediated G2/M arrest (H1299 cells), **293**, 1248
  - repair activity inhibition, association with arsenite-induced 8-hydroxyguanine (A549 cells), **297**, 924
- Lung cells
- fetal, p53 somatic mutations responsible for extended replicative life span (macaque cells), **295**, 644
  - glucocorticoid regulation of CCSP and *CYP2B1* promoters via C/EBP $\beta$  and  $\delta$ , **293**, 907
- Lung epithelial cells
- hypoxia-induced 7-helix transmembrane receptor expressed in, genomic organization and regulation (human), **291**, 1160
- Luteinizing hormone
- $\beta$ -subunit, expression in anterior pituitary cells, augmentation by annexin 5, **291**, 915
- Luteinizing hormone-releasing hormone
- effect on cell cycle, JunD-DNA binding, and DNA synthesis in human ovarian cancer cells, **294**, 11
- Luteolin
- identification of nuclear type II [<sup>3</sup>H]estradiol binding sites as histone H4 using, **296**, 1083

*lux* genes

generation of thermostable monomeric luciferases from *Photorhabdus luminescens*, **296**, 1072

## Lymphocytes

activation, regulatory role of KRAB-containing zinc finger protein ZNF304, **293**, 1066

apoptosis, associated DNA fragmentation and morphological changes (human), **294**, 872

CB2 receptor expression, autocrine and paracrine regulation by TGF- $\beta$ , **290**, 91

circulating, from insulin-dependent diabetes mellitus patients, plasma membrane oxidoreductase activity, **290**, 1589

cytotoxic, *see* Cytotoxic T cells

early apoptotic events, analysis in individual cells by fluorescence intensity and polarization measurements, **290**, 1573

mitogenically stimulated, G<sub>0</sub>–G<sub>1</sub> transition and cell cycle progression, effects of resveratrol (human), **297**, 1311

## Lymphoma

platelet protein sialic acid levels in Hodgkin's lymphoma, **297**, 502

## Lysine

C-terminal lysine-truncation mutant of porcine  $\alpha$ B-crystallin, enhanced thermostability and chaperone-like function, **297**, 309

Lys3 and Lys5 in type I membrane protein, substitution by His or Arg, and protein localization to ER, **291**, 751

## Lysinuric protein intolerance

associated mutations, effects on y<sup>+</sup>L amino acid transporter-1 trafficking to plasma membrane of mammalian cells, **291**, 1173

## Lysophosphatidic acid

modulation of *src*-suppressed C-kinase substrate gene expression, **297**, 1112

stimulation of p21-activated kinase in vascular smooth muscle cells, **291**, 687

## Lysophosphatidylcholine

hydrolysis of phosphatidylcholine isoprostanes and core aldehydes by paraoxonase-1 to, **290**, 391

## Lysosomal membrane glycoprotein

LGP85/LIMP II, Ile (476) of di-leucine sorting motif of, role in localization to endocytic organelles, **295**, 149

## Lysosome-associated membrane proteins

detection in specific granules of human eosinophils, **291**, 844

## Lysosomes

characteristics of, in specific granules of human eosinophils, **291**, 844  
distribution of LGP85/LIMP II to, role of Ile (476) of di-leucine sorting motif, **295**, 149

membranes, detergent-resistant microdomains in, **298**, 5

oxidized LDL degradation in adipocytes, role of CD36, **295**, 319

transmembrane protein 9 localization and characterization (human), **297**, 912

## Lysozyme

thermal stability and folding kinetics, linear correlation, **291**, 795

## M

## M6a glycoprotein

nerve growth factor-gated Ca<sup>2+</sup> channel action in neuronal differentiation (PC12 cells), **297**, 722

## M33 protein

nuclear translocation in regenerating liver (mouse), **291**, 508

## MA3 domain

detection in DUG, **297**, 78

## Machado-Joseph disease

enhanced SUMOylation in, **293**, 307

## MacMARCKS

interaction with serotonin transporter C-terminal region, modulation of 5-HT uptake regulation by PKC, **294**, 272

 $\alpha$ 2-Macroglobulin

binding assay with, for human metalloproteinase and thrombospondin 1, **293**, 478

## Macrophage colony-stimulating factor

gene *Csf1*, mutation in, induction of osteopetrosis in *tl* rat, **294**, 1114

Macrophage inflammatory protein-1 $\alpha$ 

expression by dendritic cells, modulation by vitamin D<sub>3</sub> and glucocorticoid pathways, **297**, 645

## Macrophage inflammatory protein-2

role in enhancement by dexamethasone of LPS-induced neutrophil accumulation in mouse lung, **294**, 1101

## Macrophage-like cells

$\gamma$ -glutamylcysteine synthetase induction by N<sup>ε</sup>-(carboxymethyl)lysine (RAW264.7 cells), **296**, 32

## Macrophage migration inhibitory factor

*mif* gene encoding, transcriptional regulation by glucose in insulin-secreting cells, **295**, 174

role in drug-induced liver injury, **294**, 225

## Macrophages

activation, high intracellular myeloperoxidase activity in, **292**, 869

## alveolar

lipopolysaccharide-induced activation, inhibition by high concentrations of LPS-binding protein, **295**, 553

ST2/ST2L gene and protein expression and ST2 effect on inflammatory response, **299**, 18

apolipoprotein E levels, modulation by glycosphingolipids (THP-1 cells), **290**, 1361

apoptosis, induction by *Bacillus anthracis* lethal toxin, **293**, 349

## CD9 expression

downregulation by interferon- $\gamma$ , **290**, 891

effect of histone deacetylase inhibition, **294**, 660

## cholesterol efflux

to free apolipoprotein A-I in C3H and C57BL/6 mice, **290**, 1376  
inhibitory effect of angiotensin II, **290**, 1529

cholesteryl ester hydrolysis, role of hormone-sensitive lipase, **292**, 900

diabetes-prone non-obese diabetic mice, abnormal response elicited by heat shock protein 60, **294**, 592

differentiation of HL-60 and THP-1 cells to, DNase II gene upregulation during, **296**, 48

differentiation of M1 leukemia cells to, regulation by DAP12 ITAM motif, **291**, 296

4-hydroxynonenal-induced MCP-1 release, role of activation of PKC- $\beta$  isoforms, **294**, 547

I $\kappa$ B activation in, induction by phosphatase inhibition, **297**, 1264

inducible nitric-oxide synthase and tumor necrosis factor  $\alpha$  expression, suppression by 4-nonylphenol, **294**, 753

inflammatory cytokine secretion, CpG motif-independent induction by plasmid-cationic liposome complex, **293**, 344

interleukin-1 $\beta$  secretion, role of ATP binding cassette transporter A1, **291**, 598

matrix metalloproteinase-9 induction by IL-1 $\beta$  via ROS and NF- $\kappa$ B (RAW 264.7 cells), **298**, 251

nitrite production, stimulation by antifungal protein and chitinase isolated from pinto bean seeds, **290**, 813

peritoneal, IL-18 expression, inhibition by heat shock response through JNK pathway, **296**, 742

peroxisome proliferator-activated receptor- $\gamma$  splice variants in, genetic analysis (monkey), **293**, 274

primary,  $\alpha$ -fetoprotein binding (human), **296**, 507

U937, *see* U937 cells

## Macrophage scavenger receptors

B1, and ABCA1, gene expression and cholesterol efflux, effect of testosterone, **296**, 1051



- cytoplasmic domain, interactions with HSP70, HSP90, and glyceraldehyde 3-phosphate dehydrogenase, **290**, 858
- MARCO, binding to bacteria, role of arginine residues in domain V, **290**, 1462
- Macrosphelide B  
suppression of metastasis through inhibition of adhesion of sLe<sup>x</sup>/E-selectin molecules, **291**, 1065
- Macular degeneration  
age-related, protection by Alu DNA polymorphism in angiotensin-converting enzyme gene, **295**, 668
- Magnaporthe grisea*  
*PLS1*, homologous genes in three fungi: fungal tetraspanin class, **297**, 1197
- Magnesium  
effects on kinetics of guanine nucleotide binding and hydrolysis by Cdc42, **297**, 653  
GDP-Mg<sup>2+</sup> binding to Cdc42, analysis using urea interaction, **291**, 1276  
influx, enhancement by nitric oxide in hypertensive rat proximal tubule cells, **294**, 710  
regulation of DNA chain unwinding and annealing activities of lipocortin I heterotetramer, **291**, 205  
two binding sites in glycogen synthase kinase-3: dual inhibition analysis with Li<sup>+</sup> and Be<sup>2+</sup>, **290**, 967
- Magnetic circular dichroism  
visible region spectra of nitrosylferrohemoglobin and oxyhemoglobin, **297**, 220
- Magnetic fields  
50-Hz, activation of DNA binding by CREB in HL60 cells, dependence on Ca<sup>2+</sup>, **296**, 1013  
power frequency fields, suppression of X-ray-induced apoptosis in Ku80-deficient xrs5 cells, **292**, 355  
static, effect on AP1 complex expression in cortical and hippocampal neurons, **292**, 200
- Magnetic linear dichroism  
visible region spectra of nitrosylferrohemoglobin and oxyhemoglobin, **297**, 220
- Magnetic resonance imaging  
contrast agent B22956/1 for, hepatic transport in vitro and in vivo, role of MRP protein, **293**, 100  
pulmonary inflammation monitored noninvasively by, in freely breathing rats, **292**, 216
- Major facilitator superfamily  
yeast plasma membrane transporter conferring monocarboxylic acid/quinidine resistance, *AQR1* gene for, **292**, 741
- Major histocompatibility complex, *see* MHC class I; MHC class II
- Major vault protein  
structural domains in, role in vault assembly, **291**, 535
- Malaria pigment  
propionic acid side chain hydrogen bonding in, **294**, 132  
synthesis by malaria parasite, physicochemical mechanism, **290**, 595
- Malate dehydrogenase  
trypanosomal aromatic  $\alpha$ -hydroxy acid dehydrogenase modeling based on, site-directed mutagenesis study, **293**, 633
- 3-(*N*-Maleimidopropionyl)biocytin  
in analysis of membrane topology of Tim44 in mitochondria, **293**, 321
- Malignancy  
algorithm for diagnosis of, in identification of genes regulating colorectal carcinogenesis, **296**, 497
- Malignant reversion  
osteosarcoma cell line Saos-2 by inhibition of NF- $\kappa$ B, **297**, 237
- Malondialdehyde  
in hippocampal neurons, AMPA-induced increase, reduction by (–)-epigallocatechin gallate, **290**, 1506
- Malonyl-CoA  
inhibition of fatty acid oxidation and cytotoxicity, association with fatty acid synthase inhibition in breast cancer cells, **285**, 217; *erratum*, **295**, 570
- Maltase–glucoamylase, *see*  $\alpha$ -Glucosidase
- Maltose-binding protein  
–NusG fusion proteins, PI' variants, efficiency of processing by TEV protease, **294**, 949
- Mammalian homologue of the *unc-18* gene  
downregulated expression in pancreatic islets of diabetic GK rat, **291**, 1038
- Mammary adenocarcinoma cells  
secreted CEACAM1 splice variants (rat MTC cells), **292**, 749
- Mammary cells  
rabbit primary and mouse HC11, reporter gene expression, effect of rabbit  $\alpha$ s1-casein gene distal enhancer, **290**, 53
- Mammary epithelial cells  
effects of hyperactive JAK2 signaling, **296**, 139  
maspin tyrosine phosphorylation in, **295**, 800  
mouse ING1 homolog protein nuclear localization signal function (HC11 cells), **293**, 163
- Mammary gland  
lactating mice, increased expression of endothelin-1 and vasoactive intestinal contractor/ET-2, **297**, 1339
- Mammary tumor cells, *see also* Breast cancer cells  
mouse, S115, proliferation, effect of recombinant syndecan-1 minican with truncated core protein, **290**, 146
- Manganese  
role in imide hydrolysis (pig), **297**, 1027
- Mannitol  
cold, and Na<sup>+</sup>/Ca<sup>2+</sup> exchange blocker, synergistic effect on blood–brain barrier opening, **291**, 669  
lowering of oxygenase activity of Rubisco, **298**, 247
- Mannose-6-phosphate receptors  
expression and binding properties during perinatal development of liver (rat), **295**, 1000
- MAP30  
production in cucurbits using plant virus vector ZYMV-AGII, **292**, 441
- MAP kinase  
activation  
in bailar artery by KCl (rabbit), **293**, 660  
in endothelial cells with different phenotypes, opposite effects of pigment epithelium-derived factor, **294**, 764  
estrogen effect on, mediation by membrane association of estrogen receptor  $\alpha$ , **294**, 926  
by gp130 stimulation in hippocampal neurons, **295**, 532  
induction by fibroblast growth factor receptor 3 isoforms, **290**, 113  
Ras-dependent, reciprocal actions of NCAM and tPA in rat hippocampal neurons via, **298**, 262  
role in metabolic responses induced by thrombin in human umbilical vein endothelial cells, **293**, 979  
hyaluronan binding protein 1 as endogenous substrate for, and translocation to nucleus on mitogenic stimulation, **291**, 829  
increased signaling during in vitro muscle wounding, **293**, 112  
inhibitors of, effects on thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72  
multiple stress-responsive gene *OsMSRMK2*, isolation (*Oryza sativa*), **294**, 1009  
phosphorylation  
in human neuroblastoma Kelly cells via endogenous receptor for melanin-concentrating hormone, **298**, 54  
induction by nociceptin/orphanin FQ, **291**, 663  
Ras/MAPK signaling pathway, role in TGF- $\beta$ 1 modulation of MMP-9 production in transformed keratinocytes, **296**, 267



- roles
  - regulation of resistin expression, **299**, 291
  - shedding of neurotensin receptor-3/sortilin luminal domain in HT29 cells, **298**, 760
  - stimulation of hepatocyte growth by EGF and G-protein-coupled receptor agonists, **291**, 588
  - TNF- $\alpha$ -induced apoptosis in mouse epidermal JB6-derived RT-101 cells, **295**, 24
- signaling pathways
  - and calcitonin induction of uPA and NF-IL3A in LLC-PK1 cells, **290**, 1483
  - and LRP expression increase by serum deprivation in primary cultured astrocytes, **299**, 102
  - molecular crosstalk with p70S6k cell signaling pathway, **293**, 463
  - sustained MEK1-ERK1/2 pathway activation in membrane skeleton, dependence on cell adhesion in megakaryocyte differentiation, **297**, 664
- MAP kinase 3
  - interaction with phospholipase C- $\beta$ 2, **293**, 647
- MAP kinase 4
  - MEKK1/MKK4/JNK cascade in endotoxin-activated microglia, effects of VIP and PACAP, **293**, 771
- MAP kinase kinase 1
  - MEKK1/MKK4/JNK cascade in endotoxin-activated microglia, effects of VIP and PACAP, **293**, 771
- MAP kinase kinase kinase
  - constitutively active, stimulating AP-1 and NF- $\kappa$ B signaling: TAK1-TAB1 fusion protein, **297**, 1277
- MAP kinase phosphatase
  - nuclear, in suppression of STAT1 activity in hepatocytes, **299**, 574
- MARCKS
  - enhanced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635
  - gene expression in pancreatic cancer cells, differential display study, **293**, 391
- MARCKS promoter
  - transcriptional regulation in immortalized hippocampal cells, **292**, 969
- MARCKS-related protein
  - interaction with serotonin transporter C-terminal region, modulation of 5-HT uptake regulation by PKC, **294**, 272
- MARCO
  - bacteria-binding activity, role of arginine residues in domain V, **290**, 1462
- Mash-1* gene
  - upregulation during neuronal differentiation of Wnt-1-overexpressing P19 cells, **293**, 167
- Maspin
  - gene silencing in breast cancer by DNA hypermethylation and histone deacetylation, **297**, 125
  - tyrosine phosphorylation in normal mammary epithelia and breast cancer cells, **295**, 800
- Mas* protooncogene
  - imprinting, restriction to antisense RNA (mouse), **290**, 1072
- Mass spectrometric immunoassay
  - comparative phenotypic analysis of human plasma and urinary retinol binding protein, **297**, 401
- Mass spectrometry
  - adenine products from 2-methyl-1,4-naphthoquinone-sensitized photoirradiation at 365 nm, **291**, 1252
  - binding patterns of V(III), V(IV), and V(V) to human serum transferrin, **296**, 1207
  - disulfated sulfakinin from central nervous system of white shrimp, **299**, 312
  - ESI-MS, *see* Electrospray ionization mass spectrometry
  - Hb Zurich-Hottingen variant detection by ESI-MS, **292**, 1044
  - 4-hydroxynonenal concentration in nucleus, **293**, 1502
  - identification of protein substrates of Ca<sup>2+</sup>/calmodulin-dependent protein kinase II in postsynaptic density, **290**, 948
  - LC-MS/MS assay of octadecanoid signaling component burst in rice seedling leaves upon wounding by cut and chitosan treatment, **295**, 1041
  - MALDI-TOF-MS, in detection by proteomics of acid-labile formylation of HIV-1 p24<sup>gag</sup> N-terminal proline, **293**, 1107
  - metformin effects on glucagon-like peptide-1 degradation by dipeptidylpeptidase IV, **291**, 1302
  - SELDI-TOF-MS, protein profiling and biomarker identification, **292**, 587
  - surface enhance laser desorption/ionization MS, capture and screening of transcription factors, **290**, 1328
- Mast cells
  - anaphylactic histamine release, modulation by plant histaminase (guinea pig), **296**, 840
  - chymase, regulation of dermal mast cell number in mice, **290**, 1478
  - dual abnormal effects of MITF mutant encoded by *Mit<sup>mh</sup>* allele (mouse), **297**, 111
  - migration, induction
    - by CCL5/RANTES via interactions with chemokine receptors CCR1 and CCR4, **297**, 480
    - by eotaxin via Rac-ERK-dependent pathway (RBL-2H3 cells), **298**, 392
  - mi* transcription factor isoforms preferentially expressed in, in vitro study (mouse), **290**, 1250
- MAT1
  - effects on HIV-1 Vpr glucocorticoid receptor coactivator activity and cell cycle arresting activity, **298**, 17
- Mating-type locus
  - silencing, role of Hrp3, **295**, 970
- Matrix-assisted laser desorption/ionization-time-of-flight mass spectrometry
  - in detection by proteomics of acid-labile formylation of HIV-1 p24<sup>gag</sup> N-terminal proline, **293**, 1107
- Matrix attachment region
  - silkworm rDNA, function as autonomously replicating sequence in plasmid and chromosomal replication origin in yeast, **299**, 723
- Matrix metalloproteinase-1
  - expression in vascular endothelial cells, upregulation via cell adhesion to extracellular matrix, **291**, 130
  - lack of expression in Ewing sarcoma, role of loss of accessibility of MMP regulatory element to fusion protein in vivo, **293**, 61; *erratum*, **295**, 573
- Matrix metalloproteinase-2
  - activation
    - effect of cyclooxygenase-2 overexpression in tumor cells, **299**, 886
    - by membrane type 1-matrix metalloproteinase induction by 4-methylumbelliferone in skin fibroblasts (human), **298**, 646
  - activity in mesangial cells, increase by endothelin-1 (rat), **299**, 555
  - expression
    - inhibition by trichostatin A, **298**, 110
    - in osteoclast cultures, regulation by osteoprotegerin, **293**, 38
  - hyaluronan-dependent secretion in human small-cell lung carcinoma QG90 cells, role of focal adhesion kinase, **290**, 1123
  - inhibition by homocysteine, **293**, 497
  - ischemia-reperfusion-induced release and activation, decrease by preconditioning, **296**, 937
  - levels in male and female breast cancer, **292**, 161
  - role in A549 cell migration on laminin-10/11, **296**, 73
  - secretion from human umbilical vein endothelial cells after treatment with thymosin  $\beta$ 4 and HGF, **296**, 401
  - and u-PA, expression in SV40 large T-antigen-immortalized cells, relationship to calpain, **297**, 294
- Matrix metalloproteinase-3
  - expression, role of PDGF, analysis in aortic endothelial cells expressing mutant PDGF receptors, **294**, 231

- lack of expression in Ewing sarcoma, role of loss of accessibility of MMP regulatory element to fusion protein in vivo, **293**, 61; *erratum*, **295**, 573
- Matrix metalloproteinase-9
- expression in osteoclast cultures, regulation by osteoprotegerin, **293**, 38
  - gene expression, role of promoter methylation (mouse lymphoma cells), **297**, 765
  - induced expression in C6 glioma cells, inhibition by PDGF via PI 3-kinase-dependent pathway, **296**, 864
  - induction by IL-1 $\beta$  via ROS and NF- $\kappa$ B in murine RAW 264.7 macrophages, **298**, 251
  - levels in male and female breast cancer, **292**, 161
  - production in transformed keratinocytes, modulation by TGF- $\beta$ 1 via Ras/MAPK signaling pathway, **296**, 267
  - secretion in MCF-7 cells, induction by FGF-2 and TPA by PKC activation of Ras/ERK pathway, **293**, 1174
- Matrix mineralization
- associated genes in human mesenchymal stem cells in vitro, screening by cDNA microarray, **290**, 381
- Maturation
- blood–brain barrier, regulation by oxygen tension, **290**, 325
  - oocytes, Ca<sup>2+</sup> response to cyclic ADP-ribose during (starfish), **290**, 1015
- Maurotoxin
- and Tsk toxin, reticulated chimeric peptide derived from, synthesis, 3D structure, and pharmacology (scorpion), **291**, 640
- Maximin H5
- cDNA cloning, synthesis, and activity (*Bombina maxima*), **295**, 796
- Mayaro virus
- infection cycle, role of casein kinase 2 activity, **296**, 1334
- MBF-1
- enhancer protein of sea urchin modulator  $\alpha$ -H2A histone gene, **295**, 519
- Mblk-1
- DNA-binding properties (honeybee), **291**, 23
- M-cells
- in vitro model, validation and quantitation, **299**, 377
- MCF-2
- alternative splicing variants, **299**, 455
- Mcl-1
- downregulation by inhibition of PI3-K/Akt pathway, requirement for cell shrinkage-dependent cell death, **290**, 1275
  - relationship to breast carcinoma apoptosis (MCF-7 cells), **297**, 943
  - role in lipoxygenase inhibitor-induced apoptosis in breast cancer cells, **296**, 942
- MCT1 gene
- genomic organization and promoter analysis (human), **292**, 1048
- MD-2
- lipopolysaccharide-binding peptide fragment, identification, **292**, 880
- Mdm2
- p19<sup>ARF</sup>-induced apoptosis insensitive to inhibition by, p53-independent pathway for, **295**, 621
- MDR-1, *see* P-glycoprotein
- mdx mouse
- micro-dystrophin cDNA introduction as transgene, effect on dystrophic phenotypes, **293**, 1265
- Measles virus
- fusion protein core, formation of stable coiled-coil trimer, **299**, 897
- Mechanical loading
- bone, fluid flow generated by, induction of COX-2 expression in MC3T3-E1 osteoblasts via PKA signaling pathway, **297**, 46
  - extracellular NAD<sup>+</sup> released by, as autocrine/paracrine signal in osteoblast physiology, **299**, 424
- Mechanical properties
- type I collagen monomer flexibility, direct quantitation, **295**, 382
- Mechanotransduction
- strain and strain rate activation of G proteins in endothelial cells (human), **299**, 258
- Medulloblastoma cells
- platelet-derived growth factor-B and -C and active  $\alpha$ -receptors in, **296**, 604
- MEF-2, *see* Myocyte enhancer factor-2
- Megakaryocyte differentiation
- cell adhesion in, role in sustained MEK1-ERK1/2 pathway activation in membrane skeleton, **297**, 664
  - induction by forced expression of EVI1 in UT-7/GM cells, **292**, 609
  - molecular mechanism (mouse), **290**, 865
- Megakaryopoiesis
- expression and function of NJ-1 surface antigen in, **292**, 667
- Megalin
- anionic glycan oligo/poly  $\alpha$ 2,8 deaminoneuroaminic acid on, **295**, 597
- Meiosis
- initiation in newt testis fragment organ culture, effect of human recombinant stem cell factor, **294**, 695
  - yeast, supercomplex formation between Mlh1–Mlh3 and Sgs1–Top3 heterocomplexes during, **296**, 949
- Melanin-concentrating hormone
- binding site different from MCH<sub>1</sub> or MCH<sub>2</sub> receptor, expression by SVK14 cells, **295**, 841
  - endogenous receptor for, in human neuroblastoma Kelly cells, **298**, 54
  - expression and function in human skin, **296**, 698
- Melanin-concentrating hormone receptor
- expression and function in human skin, **296**, 698
- Melanization
- effect of recombinant dopachrome conversion enzyme of *Aedes aegypti*, **290**, 287
- Melanocortin 5 receptor
- ligand-dependent activation: cAMP production and ryanodine receptor-dependent elevation of [Ca<sup>2+</sup>]<sub>i</sub>, **290**, 844
- Melanocytes
- biomarkers identified using DermArray DNA arrays and bioinformatics methods (human), **291**, 1052
- Melanoma
- pigmented, photosensitizing effect of protoporphyrin IX (mouse), **297**, 468
- Melanoma cells
- differential localization of nPKC $\delta$  during cell cycle progression (BL6T cells), **294**, 127
  - endoplasmic reticulum-targeted drug delivery to, by pH-sensitive liposomes, **293**, 918
  - phospholipase D1 regulation by protein kinase C  $\alpha$  in vivo (G361, MeWo cells), **294**, 1109
- Melanotropin
- SHU9119 analogues modified at position 6, design and synthesis, **292**, 1075
- Melatonin
- daily supplementation with, associated increase in atherosclerosis in proximal aorta (mouse), **293**, 1114
- Melittin
- interaction with ganglioside GM1, as model for side-by-side complex, **292**, 579
- Mel-N1
- expression in adipose cells, **294**, 329
- Mel-N2
- expression in adipose cells, **294**, 329
- Mel-N3
- expression in adipose cells, **294**, 329
- Membrane anchoring
- C-terminal, of *Escherichia coli* penicillin-binding protein 5, **290**, 427
- Membrane-associated prostaglandin-E synthase
- mPGE synthase-2, identification and characterization, **291**, 884



- Membrane association  
estrogen receptor  $\alpha$ , mediation of estrogen effect on MAPK activation, **294**, 926
- Membrane-bound enzymes  
Konrad Bloch special issue  
cholesterol synthesis from lanosterol, **292**, 1139  
lecithin retinol acyltransferase, **292**, 1243  
supernatant protein relevant to, **292**, 1293
- Membrane depolarization  
by Alzheimer A $\beta$ (1–42, aggr.) peptide  
eliminating, **293**, 1204  
mechanism, **293**, 1197  
by  $\beta$ -lactams: induction of cell wall autolysis, **290**, 1169
- Membrane flexibility  
and rolling properties of rGPIb $\alpha$ -conjugated phospholipid vesicles on vWF surface under flow conditions, **296**, 765
- Membrane fusion  
induced by major lipid-binding domain of talin, **295**, 636
- Membrane insertion  
autonomous and heteronomous positioning of transmembrane segments in multispanning membrane protein, **296**, 1
- Membrane potential  
mitochondrial, *see* Mitochondrial membrane potential
- Membrane proteins  
basolateral peptide transporter of small intestine, identification (rat), **296**, 918  
cellular functions suggested by diverse eukaryotic transcripts of short tandem repeats, **298**, 581  
colocalization with Homer/vesl, technique, **295**, 756  
cytochrome *b*<sub>558</sub> ferric/cupric reductase from rabbit duodenal brush border membranes, **291**, 220  
multispanning, autonomous and heteronomous positioning of transmembrane segments in, **296**, 1  
peroxisomal, PMP34, identification as peroxisomal ATP transporter (human), **299**, 494  
*Pseudomonas aeruginosa* tripartite efflux systems, substrate specificity, determination by RND component, **299**, 247  
selectively expressed during adipose conversion of 3T3-L1 cells, identification, **293**, 1161  
type I, Lys3 and Lys5 substitution by His or Arg, effects on protein localization to endoplasmic reticulum, **291**, 751
- Membranes  
biological, thioredoxin reductase reduction of lipid hydroperoxides and sparing of  $\alpha$ -tocopherol in, **292**, 45  
carrier-mediated transduction, correlation with hydrophobic properties of p53 C-terminal peptide, **298**, 439  
colon carcinoma cells, topography of MHC-I and ICAM-1 in, rearrangement by interferon- $\gamma$ , **290**, 635  
envelope, prepared from pea chloroplasts, protoporphyrin IX detection in, **299**, 751  
erythrocyte, fluidity, improvement by leptin via NO-dependent mechanism, EPR study (human), **297**, 672  
hepatic, insulin-stimulated inositol phosphoglycan generation in, role of G $_{q/11}$  (rat), **295**, 561  
hepatic peroxisomal, PMP70 on, nucleotide-induced conformational changes (rat), **291**, 1245  
inner nuclear, localization of reporter protein in, conferral by three-residue signal, **291**, 966  
intestinal caveolae, detection of specific binding protein/receptor for 1 $\alpha$ ,25-dihydroxyvitamin D<sub>3</sub>, **298**, 414  
intracellular trafficking pathways in bone-resorbing osteoclasts, **293**, 1060  
L-lactate, D-lactate, and glycolate transport by *Escherichia coli* L-lactate and glycolate permeases, **290**, 824  
lens, fractions containing steroid binding protein, immunomagnetic capture, **295**, 1027  
lysosomal, detergent-resistant microdomains in, **298**, 5  
mitochondrial, topology of Tim44 in, analysis with biotin maleimide, **293**, 321  
pore formation by Bax, **298**, 744  
Rab27A-dependent trafficking in specific tissues, synaptotagmin-like protein 5 function in, **293**, 899  
solubility of amphiphiles, effects of phase properties and head group, **296**, 596  
stability in *Escherichia coli*, role of OmpA, **292**, 396
- Membrane skeleton  
sustained MEK1-ERK1/2 pathway activation in, dependence on cell adhesion in megakaryocyte differentiation, **297**, 664
- Membrane stretch  
TREK-1 sensitive to, voltage-dependent gating of, molecular basis, **292**, 339
- Membrane topogenesis  
three amino-terminal transmembrane segments of glucose-6-phosphatase on endoplasmic reticulum, **292**, 153
- Membrane trafficking  
regulation by myotubularin family members hMTM1, hMTMR2, and hMTMR3, **291**, 305  
from *trans*-Golgi network, effects of dominant-negative mutant of BIG2, **294**, 254
- Membrane translocation  
apparent, caused by positively charged DNA-binding proteins, **291**, 367
- Membrane type 1-matrix metalloproteinase  
expression in skin fibroblasts, induction by 4-methylumbelliferone (human), **298**, 646
- Memory  
retention, increase by ghrelin (rat), **299**, 739
- Menadione  
sensitization of adenine to photoirradiation at 365 nm, products of, **291**, 1252  
toxicity in *Xanthomonas campestris* pv. *phaseoli*, transaldolase protective effects, **297**, 968
- Meningioma  
reduced small nucleolar RNA h5sn2 expression (human), **299**, 196
- MEPE  
cleavage of, inhibition by Phex, **297**, 38
- 2-Mercaptopyridine *N*-oxide  
one-electron oxidation, and inhibition of lipid peroxidation, **299**, 155
- Mercury  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653
- Merlin  
inhibition of NF- $\kappa$ B activation, **296**, 1295
- Mesangial cells  
apoptosis, promotion by metal-catalyzed oxidation of extracellular matrix proteins (human), **292**, 652  
collagen matrix remodeling by, mediated by  $\alpha$ 1 $\beta$ 1 integrin, stimulation by endothelin-1 (rat), **299**, 555  
expression of type IV collagen isoforms (rat), **295**, 401  
Fc $\alpha$ / $\mu$  receptor expression: candidate receptor for IgA deposition (human), **290**, 438  
LIM kinase-1 identification as ceramide-regulated gene, **298**, 408  
PDGF receptor- $\alpha$  deficiency in tenascin-C knockout mice, **290**, 1220  
Smad3 mediation of TGF- $\beta$ -induced fibronectin (mouse), **296**, 1356
- Mesenchymal-epithelial interaction  
inhibition of outer root sheath cell growth in vitro by IFN- $\beta$  secreted from hair dermal papilla cells, **290**, 1133
- Mesenchymal stem cells  
adenoviral BMP-2 gene transfer for bone tissue engineering, **292**, 144  
distinct epitopes on CD73 from, recognition by SH-3 and SH-4 antibodies (human), **289**, 519; *erratum*, **290**, 1609



- genes associated with matrix mineralization in vitro, screening by cDNA microarray, **290**, 381
- immortalized, differentiation potential of, clonal heterogeneity (human), **295**, 354
- Mesenchyme**  
subepithelial, collagen turnover in, coordinate facilitation by TGF- $\beta$ 1 and HGF, **297**, 255
- Mesenteric arteries**  
hydrogen peroxide identification as endothelium-derived hyperpolarizing factor in, **290**, 909
- Mesorhizobium loti**  
arylamine *N*-acetyltransferase genes, as first examples of NAT paralogs in prokaryotes, **293**, 783
- Meso-tetra(4-carboxyphenyl)porphine**  
optical solid-state glucose sensor using immobilized glucose oxidase with, **296**, 1069
- Mesothelial cells**  
hyperpermeability leading to accumulation of ascites fluid, induction by tumor autocrine motility factor, **293**, 192
- Messenger RNA**  
differentially expressed, identification during regeneration of pancreas (rat), **299**, 806  
diverse eukaryotic transcripts of short tandem repeats, implication of cellular functions, **298**, 581  
expressed in neurula of Chinese amphioxus, expressed sequence tag analysis, **299**, 74  
leaderless, 30S and 70S translation initiation complexes on, inhibition by kasugamycin, **297**, 1021  
profiles in liver injury and stress in lethal and nonlethal rat models, **290**, 518  
selective binding by trisamine-modified phosphorothioate antisense DNA, effect on antisense activity and toxicity, **293**, 1341  
thymidylate synthase peptide domains in interface region binding to, identification, **297**, 24
- Met**  
HGF/Met signaling, role in vascular smooth muscle cells: pathogenesis of atherosclerosis and restenosis, **298**, 80
- Metabolic responses**  
in single mitochondria, fluorescence imaging, **290**, 23
- Metabotropic glutamate receptor**  
and endothelin B receptor, chimeras, clustering by Homer/vesl, **295**, 756  
group I, trafficking in HEK293T cells, N-terminal sequence specific for Homer1 isoform controlling, **296**, 523
- Metabotropic glutamate receptor 1**  
Alzheimer A $\beta$ (1-42, aggr.) peptide-activated, elimination of membrane depolarization caused by A $\beta$ (1-42), **293**, 1204
- Metal-catalyzed oxidation**  
extracellular matrix proteins, promotion of human mesangial cell apoptosis, **292**, 652
- Metalloproteinase**  
cleavage of HB-EGF, role in *Helicobacter pylori*-stimulated EGF receptor transactivation, **295**, 695  
expression in osteoclast cultures, regulation by osteoprotegerin, **293**, 38  
snake venom, generation of angiostatin-like molecules by, **294**, 879
- Metalloproteinase inhibitor**  
blocking of angiotensin II-induced migration via inhibition of EGF receptor transactivation, **294**, 1023
- Metallothionein**  
expression in *Microsporum canis*, downregulation by fluconazole, **299**, 688
- Metal-responsive transcription factor**  
MTF-1, molecular cloning and developmental gene expression (zebrafish), **291**, 798
- Metals**  
non-iron, modulation of iron regulatory protein-1, **290**, 213
- role in imide hydrolysis (pig), **297**, 1027
- Metal transport**  
functional analysis of directed amino-acid alterations in ZntR from *E. coli*, **299**, 438
- Metastasis**  
breast cancer 4T1 cells in mice, effect of resveratrol, **291**, 1001  
colon carcinoma T84 cells, modulation by E-selectin, **293**, 1099  
implications of interaction of 5T4 with PDZ protein TIP-2/GIPC, **290**, 1030  
reduction by blockade of angiotensin receptor AT1a signaling, **294**, 441  
suppression by macrophelide B via inhibition of adhesion of sLe<sup>x</sup>/E-selectin molecules, **291**, 1065  
tumor cell potential for, increase by cyclooxygenase-2, **299**, 886
- Metformin**  
effect on  
adipose tissue resistin expression in *db/db* mice, **298**, 345  
dipeptidylpeptidase IV degradation of glucagon-like peptide-1, **291**, 1302; comment, **296**, 229  
responses to insulin and growth hormone (rat), **291**, 722  
enhancement of glucagon-like peptide 1 secretion, **298**, 779
- METH-1**, see ADAMTS1
- Methane monooxygenase**  
particulate, identification as copper-containing enzyme (*Methylosinus trichosporium*), **295**, 182
- Methanosarcina mazei**  
single replication origin revealed by Z curve method, **297**, 396
- Methanosarcina mazei**  
TATA-binding protein–promoter interaction, surface plasmon resonance measurement, **298**, 625
- Methemalbumin**  
atomic structure at 1.9 Å (human), **291**, 813
- Methionine**  
solvent-accessible, engineering in *A. radiobacter* *N*-carbamoyl D-amino acid amidohydrolase, and oxidative resistance, **297**, 282
- L-Methionine- $\gamma$ -lyase**  
identification as target for trifluoromethionine inhibition of malodorous bacterial growth, **292**, 964
- Methionine sulfoxide reductase B**  
expression and incorporation in bacterial and mammalian cells, effect of selenocysteine, **297**, 956
- Methionine sulfoxide reductases**  
mouse and *Staphylococcus aureus*, purification, characterization, and substrate specificity, **290**, 62
- N-Methyl-D-aspartate**  
induction of p35 cleavage to p25, cdk5 activation, and tau dephosphorylation, **298**, 693
- N-Methyl-D-aspartate receptor**  
signals mediated by, in hippocampal neurons, inhibitory effect of ginsenosides (rat), **296**, 247  
stimulation, induction of  $\alpha$ -tubulin degradation signaled by NO-mediated tyrosine nitration in cuttlefish nervous system, **293**, 1536
- Methylation**  
DNA, see DNA, methylation
- 2'-O-Methylation**  
location of 2'-O-methyl nucleotides in 26S rRNA and methylation guide snoRNAs in *Caenorhabditis elegans*, **297**, 1344
- 2-Methyl-4-chlorophenoxyacetic acid**  
yeast resistance to, role of Pdr1p-mediated transactivation of *TPO1* and *PDR5* genes, **292**, 530
- 3-Methylcholanthrene**  
effect on UDP-glucuronosyltransferase activity toward bilirubin in primary rat hepatocyte culture, **291**, 29  
induction of cytochrome P450 1A1, serum-induced increase, **297**, 249
- 4-Methyl-2-cyclohexenone**  
stereoselective hydroxylation, relevance to *R*-(+)-pulegone-mediated hepatotoxicity (rat), **297**, 202

- Methylglyoxal-AGE  
synthesis in aortic smooth muscle cells, role of semicarbazide-sensitive amine oxidase (bovine), **297**, 863
- Methyl mercaptan  
bacteria producing, growth of, inhibition by trifluoromethionine, **292**, 964
- 2-Methyl-1,4-naphthoquinone, *see* Menadione
- 2'-O-Methyl nucleotides  
location in 26S rRNA and methylation guide snoRNAs in *Caenorhabditis elegans*, **297**, 1344
- Methylosinus trichosporium*  
particulate methane monooxygenase from, identification as copper-containing enzyme, **295**, 182
- 1-Methyl-4-phenylpyridinium  
cellular uptake mediated by mouse cation transporter mOCT2 compared with mOCT1, **296**, 644
- 4-Methylpyrazole  
effect on formation of toxic metabolite of acetaminophen, **291**, 1089
- 4-Methylumbelliferone  
induction of membrane type 1-matrix metalloproteinase expression in skin fibroblasts (human), **298**, 646
- MexAB-OprM  
*Pseudomonas aeruginosa*, substrate specificity, determination by RND component, **299**, 247
- MexB  
transmembrane domain mutation, transport defect caused by, restoration by secondary site mutation (*Pseudomonas aeruginosa*), **292**, 513
- MexCD-OprJ  
*Pseudomonas aeruginosa*, substrate specificity, determination by RND component, **299**, 247
- MG132  
activation of transcription factors C/EBP- $\beta$  and - $\delta$  in human intestinal epithelial cells, **290**, 469  
chondrocytes sensitized by, TNF- $\alpha$ -mediated apoptosis in, **295**, 937  
regulation of tyrosine phosphorylation of IRS-1 and insulin signaling in adipocytes, **296**, 1257
- Mga2p  
identification as sensor for low temperature and oxygen for induction of *OLE1* transcription in yeast, **291**, 707
- MHC class I  
membrane topography in colon carcinoma cells, rearrangement by interferon- $\gamma$ , **290**, 635  
related MR1 protein, association with  $\beta_2$ -microglobulin, **290**, 722
- MHC class II  
expression in microglia, stimulation by glia maturation factor overexpression in astrocytes via GM-CSF secretion, **294**, 238  
mediation of signal transduction in resting B cell line, role of ERK, p38 MAP kinase, and PKC, **291**, 139
- Micelles  
dodecylphosphocholine, porcine myeloid antibacterial peptide PMAP-23 and analogues in, structural studies, **290**, 204
- Microalgae  
simultaneous detection of thiamine and its phosphate esters by HPLC, **291**, 344
- Microarray analysis, *see also* cDNA microarray  
gene expression  
changes in mouse liver induced by PPAR $\alpha$  agonists, **290**, 1114  
differences in spontaneously hypertensive and Wistar-Kyoto rats from two sources, **296**, 537  
in renal ischemia-reperfusion in mouse, **291**, 787
- Microcrystals  
promotion of neutrophil adherence to human osteoblasts, **296**, 759
- Microcystin-LR  
cell death in rat hepatocytes induced by, calpain activation after mitochondrial permeability transition in, **291**, 321
- Micro-dystrophins  
cDNA, effects on dystrophic phenotypes in transgenic *mdx* mice, **293**, 1265
- Microglia  
activated, CBP-NF- $\kappa$ B interaction in, inhibition by VIP and PACAP, **297**, 1181  
endotoxin-activated, MEKK1/MKK4/JNK cascade in, effects of VIP and PACAP, **293**, 771  
immune activation, initiation by glia maturation factor overexpression in astrocytes via GM-CSF secretion, **294**, 238
- $\beta_2$ -Microglobulin, *see* Beta $_2$ -microglobulin
- Micromechanical coupling  
between cell surface receptors and RGD peptides, **296**, 771
- Microphysiometry  
monitoring extracellular acidification in INS-1 and HIT-T15  $\beta$ -cell lines, and insulin secretion, **293**, 1168
- Microplates  
96-well arrays, measuring bacterial  $\beta$ -galactosidase activity in, **290**, 397; *erratum*, **292**, 292
- Microsomes  
hepatic, CYP2D6.10 in, catalytic activity and thermal stability (human), **293**, 969  
steroid binding protein-containing, immunomagnetic capture, **295**, 1027
- Microsporum canis*  
metallothionein expression and copper cytotoxicity, effects of fluconazole, **299**, 688
- Microtubule-associated protein light chain 3  
processing, effects of mammalian Apg12p and Apg12p-Apg5p conjugate, **296**, 1164
- Microtubule-binding domain  
tau protein, amphipathic helical behavior of third repeat fragment in, NMR study, **294**, 210
- Microtubules  
cytoplasmic ERK1/2 distribution along, **297**, 664  
single, migration in electric fields, **293**, 602
- Midbody  
Nek2 localization in mitotic cells, **290**, 730
- mif*  
transcriptional regulation by glucose in insulin-secreting cells, **295**, 174
- Mimetic mutations  
in hexaprenyl diphosphate synthase from *Sulfolobus solfataricus*, product specificity change due to, **297**, 1097
- Mineralization  
regulation, role of bone proteoglycans and components, **292**, 727
- Mineralocorticoid deficiency  
effects on ion and urea transporters and aquaporin water channels (rat), **299**, 285
- Minican  
expression and characterization: recombinant syndecan-1 with truncated core protein, **290**, 146
- Mismatch repair proteins  
Mlh1-Mlh3 complex, formation of supercomplex with Sgs1-Top3 in meiotic yeast cells, **296**, 949
- Mis-rejoining  
*ccdB* DNA double-strand breaks by ataxia-telangiectasia nuclear extract, **297**, 275
- MITF  
mutant encoded by *Mt<sup>wh</sup>* allele, dual abnormal effects on mast cells (mouse), **297**, 111
- Mitochondria  
apoptosis mediated by, resistance to, in leukemic cells resistant to 9- $\beta$ -D-arabinofuranosylguanosine (human), **298**, 338  
ATPase subunit 6 and cytochrome *b* gene polymorphisms in young obese adults, **290**, 1199



- Bax translocation to, during apoptosis, prevention by Bcl-X<sub>L</sub> and calyculin A, **291**, 1258
- beta cell, pyruvate metabolism, and role of PDH activation in glucose-stimulated insulin secretion, **291**, 1081
- binding of recombinant spermidine/spermine N<sup>1</sup>-acetyltransferase to, effect of phosphorylation by CK1, **290**, 463
- complete genome, sequence analysis in Leber's hereditary optical neuropathy, **295**, 342
- deoxyguanosine kinase, role in acquired resistance to 9-β-D-arabinofuranosylguanine cytotoxicity, **293**, 1489
- electron transport, lack of role in acute O<sub>2</sub> sensing in model airway chemoreceptors, **291**, 332
- enzyme content in respiratory competent yeast, effects of Ras cascade activation, **293**, 1383
- ethanol injury, protection by polyenylphosphatidylcholine, role of dilinoleoylphosphatidylcholine (rat), **291**, 1109
- F<sub>1</sub>-ATPase nucleotide-independent Fe(III) binding site localization on β subunit, **297**, 587
- genome content, regulation during nematode development, **291**, 8
- hepatic
- citrate carrier expression, starvation-induced posttranscriptional control (rat), **299**, 418
  - dysfunction by selenite (rat), **294**, 1130
  - glycerophosphate acyltransferase activity, stimulation by casein kinase II (rat), **296**, 1091
  - isolated, permeability transition inhibition by aldehydes (rat), **291**, 215; *erratum*, **292**, 787
  - ornithine/citrulline transporter mRNA, hormonal induction, **294**, 749
- localization of putative mammalian D-lactate dehydrogenases, **295**, 910
- NAD(P)H, biphasic oxidation, **291**, 170
- nitric oxide localization by confocal microscopy (H9c2 cells), **290**, 1010
- nitric-oxide synthase associated with, activation by superoxide, **296**, 413
- number and morphology, effect of ablation of cellular prion protein expression, **291**, 372
- preferential localization of water-soluble fullerene derivative, **294**, 116
- presenilin-1 localization (rat), **295**, 766
- role in induction of laryngeal cancer cell apoptosis by recombinant adenovirus encoding H-ras ribozyme, **298**, 805
- role in regulation of cellular life span, **294**, 245
- single, fluorescence imaging of metabolic responses in, **290**, 23
- Tim44 membrane topology in, analysis with biotin maleimide, **293**, 321
- transcription factor A, preferential binding to oxidatively damaged DNA (human), **295**, 945
- tributyltin-induced cytochrome *c* release, mechanisms, **292**, 904
- tricarboxylate carrier BBG-TCC, identification and characterization, **295**, 463
- Mitochondrial DNA
- copy number during nematode development, **291**, 8
  - deafness-associated A1555G mutation, pathogenesis of, **293**, 521
  - entire mitochondrial genome in Parkinson's disease, sequence analysis, **290**, 1593
  - HeLa cells depleted of, hypoxic induction of HIF-1α and oxygen-regulated gene expression in, **297**, 346
  - specific polymorphism, in Klinefelter's syndrome, **297**, 341
- Mitochondrial membrane potential
- loss of, role in tributyltin-induced cytochrome *c* release from isolated mitochondria, **292**, 904
  - in neural cell line, high-throughput measurements with fluorescence plate reader, **298**, 750
  - in single mitochondria, fluorescence imaging, **290**, 23
  - TRAIL-induced loss resulting in BJAB cell apoptosis, inhibition by Epstein-Barr virus BHRF1, **297**, 682
- Mitochondrial permeability transition
- induction by selenite through thiol-oxidation (rat liver), **294**, 1130
  - inhibition by aldehydes, **291**, 215; *erratum*, **292**, 787
  - inner membrane, relationship to biphasic oxidation of NAD(P)H, **291**, 170
  - in microcystin-induced cell death in rat hepatocytes, calpain activation after, **291**, 321
  - role in tributyltin-induced cytochrome *c* release from isolated mitochondria, **292**, 904
- Mitogenesis
- anti-mitogenic pathway from α1B-adrenergic receptor to c-Jun N-terminal kinase, role of Dbl's Big Sister, **296**, 85
  - endocrine disrupting agent with activity for, identification (corn), **291**, 692
  - insulin-like growth factor 1-dependent, enhancement by PKC ζ in rat clonal β cell line RIN 1046-38, **290**, 85
  - stimulation by PMA, nuclear translocation of hyaluronan binding protein 1/C1QBP/p32 upon, **291**, 829
- Mitosis
- LIM-kinase 1 phosphorylation and activation dependent on, **290**, 1315
  - Nek6 as mitotic histone kinase regulating chromatin condensation in mammalian cells, **293**, 753
- Mitotic arrest
- paclitaxel-induced, Bcl-2 dephosphorylation after, role of PP1 phosphatase, **294**, 504
- Mitotic cells
- Nek2 localization to multiple sites: Nek2 role in multiple cellular functions during cell cycle, **290**, 730
- Mitotic checkpoint kinase
- BubR1, interaction with β2-adaptin clathrin adaptor, **298**, 720
- mi transcription factor
- isoforms preferentially expressed in cultured murine mast cells, **290**, 1250
- mlc-2a
- expression in chimeric mice and Down syndrome, reduction by extra human chromosome 21, **295**, 112
- Mlh1–Mlh3 complex
- formation of supercomplex with Sgs1–Top3 in meiotic yeast cells, **296**, 949
- MLP
- binding by putative mammalian D-lactate dehydrogenases, **295**, 910
- Module fusion
- in A-type flavoprotein from *Synechocystis*, condensation of multiple-component pathway in single polypeptide chain by, **294**, 82
- Molecular aptamer beacons
- for real-time protein recognition, **292**, 31
- Molecular dynamics
- restrained, and NMR, structural analysis of hedamycin: d(ACCGGT)<sub>2</sub> complex using, **290**, 1602
- Molecular modeling
- CDK5–roscovitine, **297**, 1154
  - comparative, *Escherichia coli* UMP kinase, **294**, 173
  - flavonoids inhibiting xanthine oxidase, **294**, 167
  - melittin–GM1 interaction, **292**, 579
- Molecular motor
- processive movement of class VI myosin along actin filaments backward with large steps, **290**, 311
- Molecular weight determination
- hemoglobin equilibrium analysis by multiangle laser light-scattering method, **290**, 1382
- Moloney murine leukemia virus
- expression of unspliced RNA, *cis*-elements involved in, **290**, 1139
- Molten globule state
- papain, stabilization by urea, **290**, 1441
- Molybdenum
- role in life, **292**, 293



- Monocarboxylate transporter  
MCT1, genomic organization and promoter analysis (human), **292**, 1048
- Monocarboxylic acids  
and quinidine, yeast plasma membrane transporter gene *AQR1* conferring resistance to, **292**, 741
- Monoclonal antibodies  
antiperoxidase, enhancement of refolding of horseradish peroxidase, **291**, 959  
ephrin-A2 function-blocking and non-blocking, structural analysis with, **295**, 348  
Hantaan virus, in vitro and in vivo protective activity, **298**, 552  
to MUC1 glycoform, scanning immunoelectron microscopic analysis of endometrial epithelium epitopes with, **292**, 102  
rat, catalysis of nitrophenyl- $\beta$ -lactam hydrolysis, **299**, 273  
to Ret receptor tyrosine kinase, generation and characterization, **294**, 813  
to SH-3 and SH-4, recognition of distinct epitopes on CD73 from mesenchymal stem cells (human), **289**, 519; *erratum*, **290**, 1609  
STRO-1, immunoselection of human osteoprogenitors with, for formation of bone in vivo on PLA scaffolds, **299**, 208  
to Toll-like receptor 3, block of double-stranded RNA-mediated signaling, **293**, 1364  
to TSH receptor, with stimulating activity, generation, **299**, 891
- Monocyte chemoattractant protein 1  
expression, upregulation and TGF- $\beta$ 1 effects in Peyronie's disease, **295**, 1014  
expression by dendritic cells, modulation by vitamin D<sub>3</sub> and glucocorticoid pathways, **297**, 645  
4-hydroxynonenal-induced release by macrophages, role of activation of PKC- $\beta$  isoforms, **294**, 547
- Monocyte chemoattractant protein 1 receptor  
CCR2, isoforms, differential expression in monocytes, **290**, 73
- Monocytes  
adhesion to endothelial cells, effects of oral vitamin C (human), **294**, 1161  
apoptosis induction and CD36 upregulation by enzymatically modified LDL, dissociation, **290**, 988  
differential expression of isoforms of monocyte chemoattractant protein-1 receptor CCR2, **290**, 73  
differentiation, role of PPAR $\gamma$ , **290**, 707  
ERK1/2 and JNK1/2 activation by LPS, effects of hepatitis B surface antigen, **297**, 486  
IL-6 and IL-10 release in macrophage-differentiated U937 cells, effects of thrombospondin-1, **290**, 1551  
 $\beta$ -integrin and lipid changes after dietary coenzyme Q10: non-antioxidant mechanism of CoQ anti-atherogenic effects, **296**, 255  
interleukin-1 $\beta$  secretion, role of ATP binding cassette transporter A1, **291**, 598  
soluble protein derived from, conferral of Ca<sup>2+</sup> dependence on 5-lipoxygenase, **295**, 985  
THP-1, peroxisome proliferator-activated receptor  $\gamma$ 1 expression, effect of TGF- $\beta$ 1 (human), **297**, 794  
U937, *see* U937 cells
- Monocytic cells  
transcription in, mutual antagonistic effects of NF-IL6 and HSF1, **291**, 1071
- Mononucleosomes  
assembled on DNA fragment containing (GGA/TCC)<sub>n</sub> repeats, formation of DNA–DNA complex, **290**, 16
- Monooxygenase  
pentachlorophenol-degrading, in *Pseudomonas* sp. from chemostat, gene cloning and characterization, **290**, 770
- Monosodium urate monohydrate  
effect on neutrophil adherence to human osteoblasts, **296**, 759
- Monoubiquitin  
interaction with ubiquitin-interacting motif from Hrs, **296**, 1222
- MOP3  
role in hypoxia responses, **290**, 1228
- Morphine receptors  
and orphanin FQ/nociceptin receptors, dimerization, **297**, 659; *erratum*, **298**, 456
- Morphine sulfate  
induction of formation and expression of CCR5 chemokine receptor polymorphisms, **296**, 477
- Morphogenesis  
*Caenorhabditis elegans*, role of ortholog of human *PHF5a*, **297**, 1049  
tissue, associated GEX-3, isolation of interacting molecules by novel functional screening, **292**, 697
- 3-Morpholiniosydnonimine  
diaminonaphthalene nitrosation mediated by, dynamic and biphasic modulation by superoxide dismutase, **295**, 1125  
effects on vascular endothelial growth factor gene induction, **296**, 976
- Motifs  
conserved in arylamine *N*-acetyltransferase genes, **293**, 783
- Motilin  
pharmacophore, in CHO cells expressing human motilin receptor, **293**, 1223
- Motor processivity  
movement of class VI myosin processively along actin filaments backward with large steps, **290**, 311
- Mouse mammary tumor virus  
long terminal repeat, activity of, regulation by TEF-1 transcription factors, **296**, 1279
- mp29 gene  
cloning, expression, and genomic organization, **299**, 241
- mPer2*  
mRNA, entrainable expression in heart of *Clock* mutant mice on Jcl:ICR background, **298**, 198
- MR1 protein  
association with  $\beta_2$ -microglobulin, **290**, 722
- mRNA capping enzyme  
mammalian reovirus, mutational analysis, **291**, 932
- MRP proteins  
role in hepatic transport of MRI contrast agent B22956/1, **293**, 100
- msr/apj receptor  
CHO cells expressing, activation of ERKs by apelin (65–77) via PTX-sensitive G protein, **290**, 539
- Msx 1* promoter  
Smad motif similar to *Drosophila* MAD in, characterization, **291**, 655
- Msx2*  
expression in apical ectodermal ridge, regulation by *Msx2* and *Dlx5* binding site, **290**, 955
- MTF-1  
molecular cloning and developmental gene expression (zebrafish), **291**, 798
- MUC1  
formation, conservation in tumor-derived and normal epithelial cells, **293**, 1183  
glycoform, antibody to, scanning immunoelectron microscopy of endometrial epithelium epitopes with, **292**, 102
- MUC5AC  
secretion from pancreatic cancer cells in response to forskolin and VIP, **294**, 680
- MUC17  
characterization, expression, and chromosomal mapping, **291**, 466
- Mucins  
45-kDa, role in adhesion of *Trypanosoma cruzi* to cardiac myoblasts, **290**, 29

- salivary synthesis of, associated cellular responses, effect of *Porphyromonas gingivalis* lipopolysaccharide, **297**, 1149
- synthesis by gastric mucosal cells, disruption by *Helicobacter pylori* lipopolysaccharide, role of ERK and p38 MAP kinase, **294**, 220
- Mucosal immunity
- antimicrobial activity of ribosomal peptide from rainbow trout skin, **296**, 167
- $\mu$  enhancer
- activation, block by dominant-negative HMGA1, **292**, 427
- Multiangle laser light-scattering
- hemoglobin equilibrium analysis by, **290**, 1382
- Multidrug resistance
- monocarboxylic acids and quinidine, yeast plasma membrane transporter gene *AQR1* conferring, **292**, 741
  - P-glycoprotein-mediated, reversal by 5,6,7,3',4'-pentamethoxyflavone, **295**, 832
- Multidrug resistance associated protein 3
- hepatic expression, correlation with sinusoidal efflux of taurocholate, **299**, 681
- Multidrug resistance P-glycoprotein, *see* P-glycoprotein
- Multidrug resistance protein
- at blood–brain barrier, identification, **293**, 1273
  - MDR-1, *see* P-glycoprotein
  - MRP1* and *MRP3* genes, expression in human colon cancer cells, induction by NSAIDS, **290**, 1427
  - Mrp2-deficient (TR)<sup>−</sup> rats, hepatobiliary excretion of biliverdin isomers and C10-substituted biliverdins, **293**, 1077
- Multidrug resistance protein 1
- N-terminal nucleotide-binding domains, nucleotide triphosphatase activity of, **296**, 388
  - role in protection from heavy metal oxyanions, studies in vitro and in *MRP1*-deficient mice, **291**, 617
- Multidrug resistance protein 3
- promoter, transcriptional regulation in intestinal cells, **291**, 270
- Multidrug resistance transporter
- MDR-1, *see* P-glycoprotein
- Multigene family
- containing PHD-finger-like motif, identification and characterization (mouse), **293**, 816
- Musashil gene
- expression in human hepatoma cell lines, **293**, 150
- Muscle, *see also specific types*
- AMPK activity dissociation and ACC $\beta$  phosphorylation, dissociation during prolonged exercise (human), **298**, 309
  - differentiation, Raf/ERK pathway inhibition during, role in cell cycle arrest induction by p38 MAPK activation, **298**, 765
  - embryonic, preferential expression of homeodomain-interacting protein kinase 2 gene (mouse), **290**, 942
  - gene expression after electroporation with plasmid vector with SV40 enhancer elements (mouse), **298**, 505
  - GLUT4 gene transcription, induction by exercise, **292**, 409
  - promoters specific to, regulation by transcriptional enhancer factor-1–myocyte enhancer factor-2 interaction, **294**, 791
  - specific expression of *Caenorhabditis elegans* ortholog of human *PHF5a*, **297**, 1049
  - wounding in vitro, increased MAPK signaling during, **293**, 112
- Muscle cachexia
- molecular regulation, review, **290**, 1
- Muscle creatine kinase promoter/enhancer
- short, MCK1350, skeletal muscle dystrophin expression, *mdx* mice, **292**, 626
- Muscle–eye–brain disease
- $\alpha$ -dystroglycan deficiency in, **291**, 1283; *erratum*, **293**, 1579
- Muscle regulatory factor 4
- gene promoter, fast fiber enhancer in, **299**, 7
- Muscular dystrophy
- tripeptide sequence in, deletion, and conformation of synthetic peptides of caveolin-3 scaffolding domain, **298**, 203
- Musculoskeletal disorders
- use of bFGF in, precaution: bFGF inhibitory effect on endochondral heterotopic ossification, **293**, 680
- Mutational strand asymmetry
- in mitochondrial cytochrome *b* gene in young obese adults, **290**, 1199
- Mutations
- silent, effects on in vivo protein folding in *Escherichia coli*, **293**, 537
- Myasthenia gravis
- related autoantibodies, RNA aptamer activity against, improvement by extended sequence selection, **290**, 656
- Mycobacterium leprae*
- truncated hemoglobin from, **294**, 1064
- Mycobacterium tuberculosis*
- shikimate kinase from, molecular model, **295**, 142
- Mycoplasma hominis*
- ftsZ* gene, characterization and sequence variability in clinical isolates, **293**, 155
- Mycoplasmas
- sterols and acylated proteins in, Konrad Bloch special issue, **292**, 1289
- Myeloid
- PMAP-23 from, fungicidal peptide analogs based on, design (pig), **293**, 231
  - sheep, mRNA, SMAP-29 (1–18) isolated from, antifungal mechanism against *Trichosporon beigelii*, **295**, 591
- Myeloid cells
- interleukin-18 gene expression, effects of histone deacetylase inhibitors, **292**, 937
- Myeloma cells
- extracellular calcium-sensing receptor expression, role in modulation of cell proliferation, **299**, 532
  - growth regulation via Akt/Gsk3/forkhead signaling pathway (RPMI-8226), **297**, 760
- Myelomonocytic differentiation
- HL-60 and THP-1 cells, deoxyribonuclease II gene upregulation during, **296**, 48
- Myeloperoxidase
- high intracellular activity in macrophage activation, **292**, 869
- Myoblasts
- adipogenic potential based on age, and p130/p107 expression, **296**, 1340
  - cardiac, adhesion of *Trypanosoma cruzi* to, role of 45-kDa mucin, **290**, 29
  - intracellular Ca<sup>2+</sup> levels in vitro, effects of hyperpolarization and depolarization, **290**, 1176
  - myogenin expression and differentiation, androgen receptor effects in, **294**, 408
  - ventricular, mitochondrial nitric oxide localization by confocal microscopy (H9c2 cells), **290**, 1010
  - Zfhep transcription factor phosphorylation (C2C12 cells), **296**, 368
- Myocardial infarction
- cardiac remodeling after, role of heparin-binding epidermal growth factor-like growth factor, **297**, 375
- Myocardial ischemia
- acute, post ischemia Ca<sup>2+</sup>/calmodulin-dependent protein kinase II dynamics (rat), **297**, 997
- Myocardium
- creatine kinase functional properties and [Ca<sup>2+</sup>]<sub>i</sub> metabolism (mouse), **298**, 163
  - failing, endothelin-converting enzyme-1 upregulation in, prevention by angiotensin-converting enzyme inhibitor therapy (human), **295**, 1057



- matrix metalloproteinase-2 release and activation induced by ischemia–reperfusion, decrease by preconditioning, **296**, 937
- RAMP1 and RAMP3 expression, increase in chronic heart failure (rat), **294**, 340
- remnant lipoprotein particle uptake through VLDL receptor, **293**, 1007
- ventricular, failing, associated augmentation of cardiac ankyrin repeat protein (human), **293**, 1377
- Myocyte enhancer factor-2
- class II histone deacetylase CeHDA-7 interacting with, characterization (*Caenorhabditis elegans*), **293**, 1295
- interaction with transcriptional enhancer factor-1, regulation of muscle-specific promoters, **294**, 791
- Myocytes
- atrial, V-1 expression in Dahl salt-sensitive rat, enhancement by hypertension, **298**, 793
- cardiac, *see* Cardiomyocytes
- hypoxia–reoxygenation injury, protective effects of mixed tocopherol preparation vs tocopherol alone (rat), **291**, 349
- Myogenesis
- fast fiber enhancer in muscle regulatory factor 4 gene promoter, **299**, 7
- increase by myostatin knockout in mice, **291**, 701
- TBP-interacting protein 120B induced in relation to, binding to NOT3, **296**, 1097
- Myogenin
- expression, enhancement by androgen receptor, **294**, 408
- Myosin
- class VI
- binding to DOC-2/DAB2, **292**, 300
- movement processively along actin filaments backward with large steps, **290**, 311
- light chain, phosphorylation of, identification of bovine lactoferrin region promoting, **299**, 813
- light chain-6, gene expression in pancreatic cancer cells, differential display study, **293**, 391
- promoters for myosin light chain 2v and  $\beta$ -myosin heavy chain, regulation by TEF-1–MEF-2 interaction, **294**, 791
- subunit binding PP1, phosphorylation by p21-activated kinase (rat), **297**, 773
- $\beta$  Myosin
- heavy chain gene mutations in dilated cardiomyopathy, **298**, 116
- Myosin-binding protein C
- gene mutations in dilated cardiomyopathy, **298**, 116
- Myosin light chain kinase
- endothelial cell, interaction with cortactin, **298**, 511
- Myosin motor-like domain
- class V chitin synthase with, *csmA* gene encoding, translation as single polypeptide and regulation by osmotic conditions (*Aspergillus nidulans*), **298**, 103
- Myostatin
- knockout in mice, effects on myogenesis and adipogenesis, **291**, 701
- missense mutant, induction of hyperplasia without hypertrophy in mouse muscle, **293**, 247
- Myotubularin family
- hMTM1, hMTMR2, and hMTMR3 in, potential functional redundancy, **291**, 305
- Myotubular myopathy
- hMTM1 protein mutated in, potential functional redundancy with hMTMR2 and hMTMR3, **291**, 305
- Myristoylation
- calcium-myristoyl switch of visinin-like protein-1, structural role of calcium-binding EF-hand motifs, **296**, 827
- N
- NAADP
- binding and release properties, effects of luminal and extravesicular  $\text{Ca}^{2+}$ , **295**, 806
- $\text{Na}^+/\text{Ca}^{2+}$  exchange blocker
- and cold mannitol, synergistic effect on blood–brain barrier opening, **291**, 669
- $\text{Na}^+/\text{Ca}^{2+}$  exchanger current
- and response to isoproterenol, in acutely isolated and short-term cultured adult ventricular myocytes, **297**, 302
- $\text{Na}^+$ -coupled citrate transporter
- primary structure, genomic organization, and transport function (human), **299**, 465
- $\text{NAD}^+$
- chromate reduction to chromium(III)– $\text{NAD}^+$  complex by bacterial flavin reductase system, **294**, 76
- extracellular, as autocrine/paracrine signal in osteoblast physiology, **299**, 424
- NADP-glutamate dehydrogenase
- GDH1* encoding, expression of, regulation by *GLN3*, *GCN4*, and *HAP4* under respiratory growth, **293**, 79
- NAD(P)H
- formation in single mitochondria, fluorescence imaging, **290**, 23
- mitochondrial, biphasic oxidation, **291**, 170
- NADPH-cytochrome P450 reductase
- Phanerochaete chrysosporium*, kinetic mechanism, **299**, 189
- NADPH oxidase
- activation in neutrophils, role of p38 MAP kinase and Rac (bovine), **293**, 1571
- Naf1
- attenuation of EGF/ERK2 nuclear signaling, **297**, 17
- $\text{Na}^+/\text{H}^+$  exchanger regulatory factor 2
- mediation of phosphorylation of SGK1 by PDK1, **298**, 207
- Naive T cells
- $\text{CD4}^+$ , fates of, determination by hierarchical signaling thresholds, **299**, 148
- $\text{Na}^+,\text{K}^+$ -ATPase
- $\alpha$ -subunit, binding of ATP, role of Phe<sup>475</sup>, Glu<sup>446</sup>, and Ser<sup>445</sup>, **297**, 154
- catalytic subunit, specific antigenic site on, cell surface expression, **291**, 111
- effects of mineralocorticoid deficiency (rat), **299**, 285
- function in cardiac muscle, depression by lack of nitric oxide synthase, **294**, 1030
- translocation, induction by Rho small GTPase in renal epithelial cells, **297**, 1231
- $\alpha$ -Naphthoflavone
- effect on *CYP1A1/1A2* induction by  $\beta$ -naphthoflavone or omeprazole, **296**, 172
- $\beta$ -Naphthoflavone
- CYP1A1/1A2* induction by, effect of  $\alpha$ -naphthoflavone, **296**, 172
- Natural killer cells
- Fas ligand localization in cytoplasmic granules, **296**, 328
- IL-12-activated STAT4 in, human perforin gene as direct target of, **297**, 1245
- impaired activity in leptin receptor-deficient mice: leptin role in NK cell development and activation, **298**, 297
- interleukin-2-mediated upregulation of urokinase plasminogen activator and uPA receptor, **292**, 184
- interleukin-2 receptor signaling through Shb adapter protein, **296**, 929
- susceptibility of mouse tumor cell lines to, conferral by high levels of anti-“pan” RAE-1 antibody, **290**, 140
- NBS1
- recruitment into PML oncogenic domains via interaction with SP100 protein, **299**, 863
- Nck2 adaptor protein
- interaction with TrkB, promotion by brain-derived neurotrophic factor, **294**, 1087
- Necrosis
- orderly DNA fragmentations in, **294**, 934



- role in ceramide promotion of cervical tumor cell death (human), **293**, 1028
- Necrosis-like cell death  
tumor necrosis factor-induced, p21<sup>WAF1/Cip1</sup> upregulation prior to, **294**, 672
- Nectin  
second immunoglobulin-like loop, role in cell–cell adhesion, **293**, 45
- Nectin-1 $\alpha$   
ectodomain shedding by SF/HGF and TPA in MDCK cells, **299**, 472
- Nedd4 protein  
WWP1, domain structure, effect of alternative splicing, **290**, 431
- Nef-associated factor 1  
attenuation of EGF/ERK2 nuclear signaling, **297**, 17
- Nef protein  
HIV-1, CD4 binding to, role of helix in CD4 cytoplasmic domain, **292**, 734
- Nek2  
localization to multiple sites in mitotic cells: role in multiple cellular functions during cell cycle, **290**, 730
- Nek6 protein kinase  
potential homolog of NIMA histone H3 kinase, identification and characterization, **293**, 753
- Nemaline myopathy  
slow  $\alpha$  tropomyosin Met9Arg mutant causing, generation with baculovirus system, **296**, 300
- Nematocyst  
venom of, proteinaceous toxins from, isolation and bioactivities (Okinawan sea anemone), **294**, 760
- Neointima  
arterial, formation after balloon angioplasty, effect of YC-1, **291**, 1014
- Neomycin  
induction of pH-sensitive activation of calcium-sensing receptor, **297**, 71  
sensitivity to, effects of deafness-associated A1555G mitochondrial DNA mutation, **293**, 521
- Neoplasias  
homeodomain-interacting protein kinase 2 gene expression (human), **290**, 942
- Neoplastic transformation  
inhibition by transcriptional activation of p21<sup>Cip1</sup> by Drm/Gremlin, **295**, 1135
- Nephrolithiasis  
calcium oxalate, differentially expressed genes during progression of, global analysis, **296**, 544
- Nepriylisin  
folding, role of C-terminal cysteines, **295**, 423
- Nerve growth factor  
gated Ca<sup>2+</sup> channel, M6a action, neuronal differentiation (PC12 cells), **297**, 722
- $\beta$ -Nerve growth factor  
crystallization and preliminary X-ray diffraction studies (cobra venom), **297**, 1008
- Nerve growth factor-induced clone B  
identification as substrate of ERK2, **291**, 1146
- Nerve growth factor receptor  
TrkA, role in tyrosine phosphorylation and processing of  $\beta$ -APP, **295**, 324
- Nerve processes  
PTP-FERM localization by FERM domain, **292**, 13
- Nervous system  
NMDA receptor stimulation in, induction of  $\alpha$ -tubulin degradation signaled by NO-mediated tyrosine nitration (cuttlefish), **293**, 1536  
tissue distribution of rat neuroglobin, **290**, 1411
- Nestin  
ABCG2-expressing side population cells in nestin-positive islet-derived progenitor cells (human), **293**, 670
- Net1  
phosphorylation by Cdc5 in budding yeast, **294**, 687
- Neural cell adhesion molecule  
and tPA, reciprocal actions via Ras-dependent MAPK activation in rat hippocampal neurons, **298**, 262
- Neural cells  
differentiation, role of nuclear actin-related protein ArpN $\alpha$ , **299**, 328  
mitochondrial membrane potential, high-throughput measurements with fluorescence plate reader, **298**, 750
- Neural crest  
DSCAM expression, endogenous promoter driving, **299**, 1
- Neural development  
*dullard* gene required for, molecular cloning and characterization (*Xenopus laevis*), **295**, 85
- Neural tissue  
embryonic, preferential expression of homeodomain-interacting protein kinase 2 gene (mouse), **290**, 942
- Neurexin 3  
mRNA, heart-specific splicing, identification and characterization (human), **298**, 151
- Neurite outgrowth  
from dorsal root ganglia neurons, enhancement by islet-neogenesis-associated protein, **291**, 649  
synergistic effects of fibronectin and FGF receptors, **295**, 898
- Neuritogenesis  
polarization of constitutive exocytosis by effectors of Rho-family GTPases, **294**, 923
- Neuroblastoma  
protein kinase C  $\gamma$ -GAP-43 interaction, modulation by palmitoyl-carnitine, **294**, 823
- Neuroblastoma cells  
Akt pathway activation by apolipoprotein 2a in isoform-specific manner (neuro-2a cells), **292**, 83  
dopaminergic, CREB regulation by nociceptin/orphanin FQ (SH-SY5Y cells), **291**, 663  
endogenous receptor for melanin-concentrating hormone (Kelly cells), **298**, 54  
staurosporine-induced death, caspase role: discrepancy in in vitro and in vivo caspase assays with zASP-CH<sub>2</sub>-DCB, **291**, 1022
- Neuroblasts  
*Drosophila melanogaster*, immunohistochemical colocalization of Yellow and male-specific Fruitless, **293**, 1262
- Neuroendocrine-specific protein  
*Caenorhabditis elegans* reticulon, interaction with RME-1 during embryogenesis, **293**, 698
- Neuroepithelial body  
airway, acute O<sub>2</sub> sensing in H146 cell model of, lack of role of mitochondrial electron transport, **291**, 332
- Neurofibromin  
transmembrane segment encoded by N-terminal splice product *NFI-10a-2* of *NFI* gene, **294**, 496
- Neurogenic differentiation  
adipose-derived stromal cells (human, mouse), **294**, 371
- Neuroglobin  
full-length cDNA cloning of human NGB and tissue expression of rat protein, **290**, 1411
- Neuromedin N  
large recombinant NN peptide, production, binding activity, and biological activity, **290**, 1161
- Neuronal calcium-binding proteins  
intracellular sensors from calmodulin superfamily, **290**, 615
- Neuronal cells  
membrane depolarization caused by A $\beta$ 1-42 peptide, mechanism (hNT cells), **293**, 1197

## Neuronal differentiation

- genes involved in, cloning from 2Y-3t cell line established from cerebellum of p53<sup>-/-</sup> mouse, **297**, 473
- nerve growth factor-gated Ca<sup>2+</sup> channel, M6a action, **297**, 722
- P19 cells, promotion by Wnt-1, **293**, 167
- PC12 cells, inhibition by expanded CTG repeats, **295**, 289

## Neuron-restrictive silencer factor

- REST/NRSF-silencing function during BDNF gene promoter activation, REST4-mediated modulation, **290**, 415

## Neurons

- 2Y-3t cell line established from cerebellum of p53<sup>-/-</sup> mouse, cloning of genes from, **297**, 473
- adhesion and neurite extension, synergistic effects of fibronectin and FGF receptors, **295**, 898
- apoptosis, induction by ceramide via caspase-9/caspase-3 pathway, **299**, 201
- autonomic, supplying fat depots in pig, detection of leptin receptors, neuropeptide Y, and tyrosine hydroxylase in, **293**, 1138
- cap-dependent translation, regulation by IGF-1, **291**, 560
- cerebellar, vulnerability to low potassium stress and transcription in primary culture, increase by PQBP-1, **294**, 268
- cholinergic basal forebrain, inhibition of calcium influx in, mediation by TGF- $\beta$ 2, **290**, 1321
- cortical, activity-dependent activation of BDNF gene promoter, effects of REST/NRSF and REST4 (rat), **290**, 415
- dorsal root ganglia, neurite outgrowth from, enhancement by islet-neogenesis-associated protein, **291**, 649
- expression of brain-specific CYP4X1 (rat), **296**, 677
- expression of brain- and testis-specific immunoglobulin superfamily protein in vitro, **296**, 1215
- hippocampal
  - activity, enhancement by L-trans-PDC via stimulation of glial glutamate release, **295**, 376
  - AMPA-induced [Ca<sup>2+</sup>]<sub>i</sub> increase, attenuation by (-)-epigallocatechin gallate (rat), **290**, 1506
  - Ca<sup>2+</sup> channels in, acute effects of A $\beta$ (25–35) and A $\beta$ (1–40), **296**, 1317
  - glutamate excitotoxicity, effect of gp130 stimulation, **295**, 532
  - NMDA receptor-mediated signals in, inhibitory effect of ginsenosides (rat), **296**, 247
  - reciprocal actions of NCAM and tPA via Ras-dependent MAPK activation (rat), **298**, 262
- hippocampal and cortical, API complex expression, effect of static magnetic field (rat), **292**, 200
- histaminergic, activation by orexins via orexin 2 receptor, **290**, 1237
- leptin receptor-containing, distribution in hypothalamus (pig), **298**, 333
- motor coordination-related, role of junctophilin type 3 (mouse), **292**, 318
- pre-mature, differentiated from mouse ES cells with single human chromosome 21, elevated apoptosis of, **299**, 599
- retinal, differentiation of embryonic stem cells into, **297**, 177
- single calcium channels in, upregulation by serotonin, mechanisms (*Helix pomatia*), **293**, 132
- substantia gelatinosa, excitatory transmission in, effect of hypoxia (rat), **295**, 929

## Neuropeptides

- disulfated sulfakinin from central nervous system of white shrimp, isolation, identification, and synthesis, **299**, 312

## Neuropeptide Y

- detection in autonomic neurons supplying fat depots (pig), **293**, 1138
- release by hypothalamic explants, effects of centrally administered apelin-13 (rat), **291**, 1208

*Neurospora crassa*

- PLSI-related tetraspanin gene identification, **297**, 1197

## Neurotensin

- anti-apoptotic effect in breast cancer cells, **295**, 482

- large recombinant NT peptide, production, binding activity, and biological activity, **290**, 1161

## Neurotensin receptor

- subtype 1, binding and activation by recombinant large proneurotensin/neuromedin N-derived peptides, **290**, 1161

## Neurotensin receptor-3

- luminal domain, shedding in HT29 cell line, **298**, 760

## Neurotoxicity

- A $\beta$ 1–42 mutants of familial Alzheimer's disease at positions 21–23, synthesis and analysis, **294**, 5
- amyloid  $\beta$  peptides with proline replacement: role of turn formation at positions 22 and 23, **295**, 306
- postsynaptic, of neurotoxin Oh9-1 purified from king cobra venom, **294**, 574

## Neurotoxin

- Oh9-1, purification and characterization from *Ophiophagus hannah* venom, **294**, 574

## Neurotrophin-4

- binding to TrkB receptor, site for, localization to discrete receptor domain, **291**, 501

## Neurula embryo

- Chinese amphioxus, expressed sequence tag analysis of mRNAs expressed in, **299**, 74

## Neutralizing antibodies

- to oncogenic human papillomavirus, and fate of low-grade cervical intraepithelial neoplasia, **296**, 102

## Neutral sphingomyelinase

- Mg<sup>2+</sup>-dependent, inhibition by ubiquinol in liver plasma membrane, role of isoprenoid chain, **297**, 581

## Neutrophil activating peptide-2

- murine homolog, isolation and characterization, **290**, 865

## Neutrophil elastase

- release of vascular permeability enhancing peptide from kininogens, **294**, 423

## Neutrophils

- adherence to human osteoblasts, promotion by microcrystals and f-Met-Leu-Phe, **296**, 759
- ASC upregulation by inflammation and apoptosis (human), **293**, 1314
- azurocidin, N-glycans from, structural analysis (human), **293**, 213
- capture by selectins on endothelial cells exposed to cigarette smoke, **295**, 1150
- cytoskeleton, rapid adjustment of, CD-31 priming for, **292**, 1092
- endogenous anti-inflammatory mediators from arachidonate (human), **290**, 219
- ligand binding to CXCR1 and CXCR2, and responses to CXCL8/IL-8, antagonism by CXCL8<sub>(3–73)</sub>K11R/G31P, **293**, 939
- lipopolysaccharide-induced accumulation in mouse lung, enhancement by DEX, role of CXC chemokines, **294**, 1101
- NADPH oxidase activation in, role of p38 MAP kinase and Rac (bovine), **293**, 1571
- p70S6k and MAPK cell signaling pathways, molecular crosstalk between, **293**, 463
- phospholipase D activity and degranulation, differential regulation, **292**, 951
- spontaneous apoptosis, decrease by inhibition of cGMP-dependent protein kinase, **297**, 498

## NFI gene

- N-terminal splice product *NFI-10a-2*, encoding of transmembrane segment, **294**, 496

*Nf2*

- missense mutations, effects on Schwannomin interactions, **290**, 366

## NFAT, see Nuclear factor of activated T cells

## NF-IL3A

- calcitonin-induced upregulation in LLC-PK1 cells independently of Erk1/2 phosphorylation, **290**, 1483



## NF-IL6

and HSF1, mutual antagonistic effects on transcription in monocytic cells, **291**, 1071

NF- $\kappa$ B

## activation

endotoxin-induced, in endothelial cells, role of TIRAP, **295**, 157  
inhibition by merlin, **296**, 1295

role in PKC induction of motility of breast cancers by upregulating secretion of uPA, **290**, 552

by T2BP without TNF stimulation, **290**, 1108

tumor necrosis factor  $\alpha$ -mediated, effect of MG132 and actinomycin D, **295**, 937

activation of fibronectin gene expression in rat hepatocytes, **297**, 1218; *erratum*, **299**, 167

activity in histamine-stimulated endothelial cells, regulation by phospholipase D (human), **292**, 325

atrial natriuretic peptide action on, mechanisms, **295**, 1068

blockade, attenuation of LPS-mediated IL-1 $\beta$  biosynthesis in alveolar epithelial cells, **293**, 252

double-strand decoy DNA oligomer for, inhibition of TNF- $\alpha$ -induced ICAM-1 expression in sinusoidal endothelial cells, **298**, 10

expression by dendritic cells, modulation by vitamin D<sub>3</sub> and glucocorticoid pathways, **297**, 645

gene activation dependent on, APC0576 inhibiting, and IL-1-induced chemokine production in ECs, **293**, 945

## inhibition

by *Ganoderma lucidum* in highly invasive breast and prostate cancer cells, **298**, 603

by heat shock in absence of heat shock factor-1, **291**, 453

malignant reversion of human Saos-2 osteosarcoma cells by, **297**, 237

interaction with CBP in activated microglia, inhibition by VIP and PACAP, **297**, 1181

lipopolysaccharide-mediated IL-6 biosynthesis regulation independently of, **291**, 1045

## role in

dilinoleoylphosphatidylcholine effect on LPS-induced TNF- $\alpha$  generation in Kupffer cells of ethanol-fed rats, **294**, 849

IL-1 $\beta$  induction of MMP-9 in murine RAW 264.7 macrophages, **298**, 251

TNF- $\alpha$ -induced apoptosis in mouse epidermal JB6-derived RT-101 cells, **295**, 24

signaling, constitutively active MAP kinase kinase kinase stimulating: TAK1-TAB1 fusion protein, **297**, 1277

transactivation, reduction by synergistic action of fibrates and statins, **290**, 131

## NGFI-B

identification as substrate of ERK2, **291**, 1146

*Ngn-1* gene

upregulation during neuronal differentiation of Wnt-1-overexpressing P19 cells, **293**, 167

## Nicastrin

BACE1 interaction with, **293**, 1228

## Nickel

binding activity of cullin-2, analysis, **290**, 294

role in imide hydrolysis (pig), **297**, 1027

## Nicotinamide N-methyltransferase

gene expression in liver in bacteria-induced fulminant hepatitis, cDNA microarray analysis, **298**, 675

## Nicotinamide mononucleotide adenylyltransferase

identification (human), **297**, 835

## Nicotine

consumption, effect on gene expression profile (rat heart), **297**, 729

metabolism, differences among *CYP2A6*\*7, \*8, and \*10 alleles, **290**, 318

## Nicotinic acetylcholine receptor

inhibitory and facilitatory actions of amyloid- $\beta$  peptides, **294**, 42

muscle-type,  $\alpha$ - $\delta$  acetylcholine binding site, inhibition by  $\alpha$ -conotoxin MI (*Torpedo marmorata*), **295**, 791

*nifEN* genes

FeMo cofactor-specific, functional expression as NifE-N fusion protein synthesizing unit in *Azotobacter vinelandii*, **299**, 233

## Nijmegen breakage syndrome

insulin-like growth factor I receptor expression at normal levels in fibroblasts from patients, **296**, 62

NBS1 protein causing, recruitment into PML oncogenic domains via interaction with SP100 protein, **299**, 863

## NIMA-related kinases

Nek6 identification and characterization: potential homolog of NIMA histone H3 kinase, **293**, 753

## NIRF

involved in cell cycle regulation, **296**, 530

## Nitrate

reduction to nitrite, molybdenum role in, **292**, 293

## Nitrate reductase

characterization and daily variation in *Gracilaria tenuistipitata*, **295**, 50

## Nitration

folic acid by peroxynitrite, and selective binding of 10-nitrofolate to folate receptor  $\beta$ , **297**, 1238

PECAM-1 ITIM tyrosines, abrogation of phosphorylation and SHP-2 binding, **296**, 1171

tyrosine, NO-mediated, related  $\alpha$ -tubulin degradation, induction by NMDA receptor stimulation in cuttlefish nervous system, **293**, 1536

## Nitric oxide

binding to R-state hemoglobin, kinetics, **292**, 812

binding and turnover by cytochrome *bo*<sub>3</sub> from *Escherichia coli*, **296**, 1272

direct activation of HIF-1 $\alpha$ -prolyl hydroxylase, **295**, 657

donors of, effects on vascular endothelial growth factor gene induction, **296**, 976

endothelial levels, effects of oscillatory shear, **293**, 1466

enhancement of magnesium influx in hypertensive rat proximal tubule cells, **294**, 710

mitochondrial localization by confocal microscopy (H9c2 cells), **290**, 1010

NO-steroids, anti-inflammatory profile and bronchodilator effect, **290**, 125

## production

in adipocytes, stimulation by insulin (rat), **291**, 394

in cardiac anaphylactic response in guinea pig, modulation by plant histaminase, **296**, 840

by gingival epithelial cells, upregulation by IL-15, **297**, 329

radical, donors of, specificity of antioxidant enzyme inhibition in skeletal muscle by, **294**, 1093

## role in

ceramide modulation of CYP3A4 expression in colon carcinoma HT-29 cells, **298**, 687

cytotoxicity of interferon- $\gamma$  and TNF- $\alpha$  for vascular endothelial cells, **291**, 780

leptin improvement of erythrocyte membrane fluidity (human), **297**, 672

scavenging by AMD6221, mechanism, **292**, 519

synthesis, and mitochondrial respiration, effects on intracellular oxygen tension, **290**, 97

tyrosine nitration mediated by, related  $\alpha$ -tubulin degradation, induction by NMDA receptor stimulation in cuttlefish nervous system, **293**, 1536

## Nitric oxide synthase

activity in adipocytes, effect of insulin (rat), **291**, 394

constitutive, activation in brain particulate fraction by superoxide, **296**, 413



- inducible
  - activation by ERK and p38 kinase, role in *Porphyromonas gingivalis* LPS effect on salivary mucin synthesis, **297**, 1149
  - knockout mice, mortality and course of anthrax infection in, **292**, 41
  - related pathway, correlation with cyclooxygenase-2 pathway in head and neck squamous cell carcinomas, **299**, 517
  - role in ceramide modulation of CYP3A4 expression in colon carcinoma HT-29 cells, **298**, 687
- inducible, expression
  - downregulation by iontophoresis of antisense oligonucleotide in endotoxin-induced uveitis, **295**, 336
  - by gingival epithelial cells, upregulation by IL-15, **297**, 329
  - induction by *Vibrio vulnificus* cytolysin, **290**, 1090
  - in macrophages, suppression by 4-nonylphenol, **294**, 753
  - in myocytes after hypoxia-reoxygenation, effects of mixed tocopherol preparation vs tocopherol alone, **291**, 349
- inhibitors, modulation of glutamate response in immortalized suprachiasmatic nucleus cell line, **298**, 133
- knockout mice, skeletal muscle endothelial cells, VEGF expression during prazosin-induced angiogenesis, **297**, 1270
- lack of, depression of ion-transporting enzyme function in cardiac muscle, **294**, 1030
- neuronal
  - abnormal expression, triggering of limbic seizures and hippocampal damage in rat, **291**, 255
  - increase in brain of SAMP10, promotion of Bcl-2-linked apoptosis, **297**, 517
  - related pathway, angiopoietin induction in endothelial cells by hyperbaric oxygen through, **296**, 710
- Nitrioltriacetate
  - degradation by *Kluyveromyces marxianus* IMB3, **290**, 802
- Nitrite
  - production by macrophages, stimulation by antifungal protein and chitinase from pinto bean seeds, **290**, 813
- Nitrite reductase
  - cd<sub>1</sub>, binding of cyanide: role of active site His369 in ligand stabilization (*Pseudomonas aeruginosa*), **291**, 1
  - copper-containing, C-terminally truncated, from *Achromobacter cycloclastes*, crystallography, **299**, 173
- p-Nitroanilide substrates
  - cleavage by NS3 protease of Langat virus, **294**, 16
- N<sup>G</sup>-Nitro-L-arginine methyl ester
  - attenuation of leptin effects on erythrocyte membrane fluidity, EPR study, **297**, 672
- Nitroaromatic compounds
  - co-metabolizable, chemotaxis of *Ralstonia* sp. SJ98 toward, **299**, 404
- 10-Nitrofolate
  - selective binding to folate receptor  $\beta$ , **297**, 1238
- Nitrogen fixation
  - molybdenum role in, **292**, 293
- Nitrogen sources
  - regulation of *GDH1* expression, **293**, 79
- Nitrophenyl- $\beta$ -lactam
  - hydrolysis, catalysis by rat monoclonal antibody, **299**, 273
- Nitroprusside
  - effects on vascular endothelial growth factor gene induction, **296**, 976
- Nitrosation
  - dynamic and biphasic modulation by superoxide dismutases, **295**, 1125
- S-Nitroso-N-acetylpenicillamine
  - effects on vascular endothelial growth factor gene induction, **296**, 976
  - potentiation of leptin effects on erythrocyte membrane fluidity, EPR study, **297**, 672
  - specificity of antioxidant enzyme inhibition in skeletal muscle by, **294**, 1093
- S-Nitrosocysteine
  - O<sub>2</sub>-dependent stimulation of pentose phosphate pathway in erythrocytes (human), **294**, 829
- S-Nitrosogluthathione
  - effects on vascular endothelial growth factor gene induction, **296**, 976
  - induction of functional  $\Delta F508$ -CFTR in airway epithelial cells, **297**, 552
- Nitrosothiol
  - effects on vascular endothelial growth factor gene induction, **296**, 976
- Nitrosylferrohemoglobin
  - visible region magnetic circular and magnetic linear dichroism spectra, **297**, 220
- Nitzschia microcephala*
  - simultaneous detection of thiamine and its phosphate esters by HPLC, **291**, 344
- NJ-1
  - expression and function in megakaryopoiesis, **292**, 667
- Nociceptin/orphanin FQ
  - regulation of CREB in dopaminergic SH-SY5Y cells, **291**, 663
- Nociception
  - suggested role for CLC-7, **291**, 421
- Nod1
  - enhancement of pro-interleukin-1 $\beta$  processing via interaction with pro-caspase-1, **299**, 652
- Nogalamycin
  - inhibition of DNA unwinding and ATPase activities of DNA helicase 45 (pea), **294**, 334
- Nonaprenyl-4-hydroxybenzoate transferase
  - peroxisomal activity (rat), **291**, 1128
- Non-homologous end-joining
  - DNA double-strand breaks by ataxia-telangiectasia nuclear extract, characteristics, **297**, 275
- Non-iron metals
  - modulation of iron regulatory protein-1, **290**, 213
- Nonsteroidal anti-inflammatory drugs
  - growth-suppressive effects in colon cancer cells, genes involved in, identification, **292**, 498
  - induction of *MRP1* and *MRP3* and  $\gamma$ -glutamylcysteine synthetase genes in human colon cancer cells, **290**, 1427
- Nontoxic-nonhemagglutinin
  - spontaneous nicking in *Clostridium botulinum* toxin complex, **292**, 434
- Nonvisual photoreception
  - vertebrate ancient opsin isoform Pal-VAM in smelt *Plecoglossus altivelis*, **290**, 280
- 4-Nonylphenol
  - suppression of inducible nitric-oxide synthase and TNF- $\alpha$  expression in macrophages, **294**, 753
- Nordihydroguaiaretic acid
  - induction of apoptosis in breast cancer cells, mechanism, **296**, 942
- Norepinephrine
  - stimulation of hepatocyte growth, role of MAP kinases, **291**, 588
- NOT3
  - binding by TBP-interacting protein 120B induced in relation to myogenesis, **296**, 1097
- Notch
  - and  $\beta$ -amyloid precursor protein, mutually exclusive  $\gamma$ -secretase-like cleavages in human cells, **290**, 1408
- Notch intracellular domain
  - and  $\beta$ -amyloid, production by mutually exclusive events in human cells, **290**, 1408
- Notch receptors
  - Notch1, mutations at PI' position, effect on intracellular domain stability, **299**, 569
  - Notch1, -2, and -3, functional diversity between, **291**, 775

- NS3 proteinase  
Langat virus, cleavage of serine protease substrates, **294**, 16
- NS4B  
hepatitis C virus, physical interaction with CREB-RP/ATF6 $\beta$ , **299**, 366
- NS5B  
de novo RNA synthesis by, internal initiation sites in hepatitis C virus polypyrimidine tract, **295**, 682  
hepatitis C virus, association with human eukaryotic initiation factor 4AII in vitro, **292**, 659
- NS-398  
inhibition of  $\alpha$ -smooth muscle actin expression in hepatic stellate LI90 cells, **297**, 1128  
reversal of cyclooxygenase-2-induced increase in angiogenic and metastatic potential of tumor cells, **299**, 886
- Nuclear export signal  
identification within structure of zinc finger protein TIS11, **293**, 1242
- Nuclear extract  
ataxia-telangiectasia, end-joining of DNA double-strand breaks by, characteristics, **297**, 275
- Nuclear factor 1  
role in *GADD153* gene induction by oxidative stress in vascular smooth muscle cells, **290**, 1255
- Nuclear factor of activated T cells  
NFATc, specific RNA inhibitors of, in vitro selection, **298**, 486  
L-selectin-induced activation in Jurkat cells, mechanisms, **291**, 237
- Nuclear factor-Y  
role in polyunsaturated fat inhibition of fatty acid synthase gene transcription, **290**, 1295  
role in transcriptional regulation of squalene epoxidase, **295**, 74
- Nuclear fusion  
role of yeast oxysterol-binding protein homolog *OSH3*, **293**, 733
- Nuclear hormone receptor  
LXR $\alpha$ , full expression, role of PPAR $\gamma$ , **290**, 707
- Nuclear import signal  
identification within structure of zinc finger protein TIS11, **293**, 1242
- Nuclear localization  
hepatitis C virus core protein  
reduction of p21 amount by p53-independent pathway, **294**, 528  
role of innate form of core protein, **294**, 521
- Nuclear localization signal  
effect on phage-mediated gene transfer, **297**, 779  
for extracellular superoxide dismutase, heparin-binding domain as, **296**, 54  
in mouse ING1 homolog protein, characterization, **293**, 163  
three-residue, conferral of localization of reporter protein in inner nuclear membrane, **291**, 966  
zinc-fingers and homeoboxes 1, **297**, 368
- Nuclear magnetic resonance  
Alzheimer  $\beta$ -amyloid peptide- $\beta$ -cyclodextrin interaction, **297**, 1011  
amphipathic helical behavior of tau protein microtubule domain third repeat fragment, **294**, 210  
carnosine quenching of 4-hydroxynonenal, **298**, 699  
CCK-8 and CCK-58 bioactive region conformations, **293**, 1014  
determination of secondary structure of *Escherichia coli* DnaA DNA-binding domain in solution, **299**, 42
- <sup>1</sup>H  
adenine products from 2-methyl-1,4-naphthoquinone-sensitized photoirradiation at 365 nm, **291**, 1252  
melittin-GM1 interaction, **292**, 579  
HIV-1 protease: effects of remote mutation on autolysis rates, **294**, 395  
protocol based on HN(C)N experiment for resonance assignment in (<sup>15</sup>N, <sup>13</sup>C)-labeled proteins, **293**, 427  
solution structure of ribosome-associated cold shock response protein Yfia of *Escherichia coli*, **299**, 710  
structural studies of porcine myeloid antibacterial peptide PMAP-23 and analogues, **290**, 204  
sulfated CCK-15 conformational studies, **293**, 1053  
synergistic perturbation of phosphatidylcholine/sphingomyelin bilayers by diacylglycerol and cholesterol, **296**, 806  
two-dimensional  
solution structure of  $\beta_2$ -adrenoceptor-derived intracellular signal-transducing peptide, **291**, 1297  
structural analysis of hedamycin:d(ACCGGT)<sub>2</sub> complex using, **290**, 1602  
uniform <sup>13</sup>C and <sup>15</sup>N labeling of DNA for, **290**, 928
- Nuclear matrix  
filament formation by p27<sup>BBP</sup>/eIF6, **295**, 295
- Nuclear membrane  
inner, localization of reporter protein in, conferral by three-residue signal, **291**, 966
- Nuclear protein kinase  
Dmnk, physical interactions with Orb (*Drosophila melanogaster*), **290**, 225
- Nuclear proteins  
binding to CYP1A1 negative regulatory element, specificity of, **296**, 799
- Nuclear translocation  
extracellular superoxide dismutase, **296**, 54  
hyaluronan binding protein 1/C1QBP/p32 upon mitogenic stimulation, **291**, 829  
I $\kappa$ B- $\alpha$ /NF- $\kappa$ B, redox regulation of, **296**, 847  
SHP, and visualization of interaction with HNF-4 $\alpha$  in living cells, **292**, 8
- Nucleic acid  
delivery into mammalian cells by anthrax toxin, **297**, 1121
- Nucleic acid sequence-based amplification  
method for detection of major serotypes of foot-and-mouth disease virus, **297**, 267
- Nucleocapsid protein  
HIV-1  
interaction with d(TG)<sub>4</sub>, identification of antagonists with cellular anti-HIV activity, **296**, 1228  
RNA aptamers against, selection and stabilization, **291**, 925
- Nucleolus  
in budding yeast, Cdc14 release from, assistance by Cdc5, **294**, 687
- Nucleophosmin/B23  
arginine residues, deimination in HL-60 granulocytes, **290**, 979
- Nucleoside-diphosphate kinase  
activity in brain, decrease in Alzheimer's disease and Down syndrome (human), **296**, 970  
posttranslational processing (*Drosophila melanogaster*), **295**, 689
- Nucleoside transporter  
CNT1, cell cycle-dependent regulation, **296**, 575
- Nucleosome linker proteins  
HMGB1 and histone H1, differential enhancement of DNA ligation reactions, **292**, 268
- 5'-Nucleotidases  
in cell extracts, assays for, **293**, 258
- Nucleotide-binding folds  
sulfonyleurea receptor, expression, purification, and interaction, **294**, 191
- Nucleotides  
induction of conformational changes in PMP70 on hepatic peroxisomal membranes, **291**, 1245
- Nucleotide triphosphatase  
activity of MRP1 and P-glycoprotein N-terminal nucleotide-binding domains, **296**, 388
- Nucleotidyl transfer  
by mammalian reovirus mRNA capping enzyme, mutational analysis, **291**, 932



## Nucleus

- aggregates in, formed by expressing expanded polyglutamine, ultrastructure, **294**, 429
- angiogenin function in, in endothelial cells, relationship to rRNA production, **294**, 287
- caspase-7 transport, inhibition by its prodomain, **291**, 79
- EGF/ERK2 signaling, attenuation by Naf1, **297**, 17
- focal adhesion kinase N-terminal domain localization independently of Tyr397 and C-terminal domain, **299**, 62
- homeodomain interacting protein kinase 2 association with Ran-binding protein, **297**, 148
- 4-hydroxynonenal level, and cytotoxic and cytostatic effects in osteosarcoma cells (human), **293**, 1502
- membrane, lamina-associated polypeptide 1s localization to, **294**, 770
- mouse Polycomb M33 protein translocation in regenerating liver, **291**, 508
- phenobarbitone-mediated translocation into, of cytosolic proteins interacting with hepatic CYP2B1/B2 gene 5'-proximal region (rat), **292**, 312
- protein import, age-associated reduction in fibroblasts (human), **294**, 354

## Nurr1

- effects on pRL-TK and phRG-B internal control plasmid in genetic reporter system, **294**, 1036

## Nutrition

- effects on cell survival and gene expression of transplanted fat tissues in mice, **295**, 630

## N-WASP

- and Arp2/3 complex, actin filament branching caused by, visualization and force measurement, **293**, 1550
- cooperative function with WICH in actin-microspike formation, **291**, 41

## NYD-SP6

- gene cloning and role in regulation of testicular development/spermatogenesis, **291**, 101

## O

## OASIS

- activation of transcription, role of transmembrane domain, **293**, 470

## ob

- expression in 3T3-L1 adipocytes, downregulation by intracellular fatty acid, **297**, 1291

## Obesity

- adipocytes derived from obese rats and humans, lipolysis by, effects of azafitig, **293**, 847
- associated mitochondrial ATPase subunit 6 and cytochrome *b* gene polymorphisms in young adults, **290**, 1199
- association with polymorphism in exon 4 of 3 $\beta$ -hydroxysteroid dehydrogenase type I gene, **293**, 629
- in bilateral ovariectomized rat, relationship to decreased leptin receptor expression in brain, **290**, 1349
- and coronary artery disease, increased plasma HB-EGF associated with, **292**, 781; *erratum*, **295**, 571
- late-onset, in 5-HT<sub>2C</sub> receptor mutant mice, altered gene expression in, **295**, 249
- metformin effect on adipose tissue resistin expression in *db/db* mice, **298**, 345
- related diseases, prevention by counteracting effects of thrifty genes for energy metabolism, **295**, 207
- role of uncoupling proteins, review, **293**, 1145

## OC-3

- characterization, **292**, 848

## Occludin

- gene expression with differential splicing and alternative promoter usage, **298**, 657

## Oct-3/4

- inactivation in mouse preimplantation embryos and oocytes using short interfering RNA, **296**, 1372

## OCTN

- mammalian, human cDNAs homologous to, **297**, 1159

## 3-Octynoyl-CoA

- direct hydration by crotonase, missing link in Konrad Bloch's enzymatic studies with 3-alkynoyl thioesters, **292**, 1171

## Ohr

- role in organic peroxide-induced gene expression and protection against organic peroxides in *Xanthomonas campestris*, **299**, 177

## OLE1 gene

- transcription in yeast, induction by low temperature and oxygen, Mga2p identification as sensor of, **291**, 707

## Oligodendrocytes

- migration, proliferation, and/or maturation, possible role of PPAR $\delta$ , **290**, 230

## Oligodeoxynucleotides

- antisense, in vitro transfer into coronary endothelial cells by ultrasound, **298**, 587

## Oligomerization

- Caenorhabditis elegans* CED-4, **290**, 359
- cyclic nucleotide phosphodiesterases from plant, yeast, and *E. coli*, **291**, 875
- DsRED fusion proteins, reduction of, **298**, 707

## Oligonucleotide arrays

- analysis of gene expression patterns during glucocorticoid-induced apoptosis using, **293**, 1254

## Oligonucleotide microarray

- data mining to search for age-dependent gene expression, **298**, 772

## Oligonucleotides

- antisense, *see* Antisense oligonucleotides
- DNA tetraplex forming, mediation of suppression of c-myc in Burkitt's lymphoma cells, **290**, 11
- d(TG)<sub>4</sub>, interaction of HIV-1 nucleocapsid protein with, identification of antagonists with cellular anti-HIV activity, **296**, 1228
- hedamycin:d(ACCGGT)<sub>2</sub> complex, NMR structural analysis, **290**, 1602
- single-stranded 45-base, targeted gene correction of *hprt* mutations, **299**, 787

## Oligopeptides

- transport in intestine, basolateral transporter for, **296**, 918
- trypsin-catalyzed hydrolysis, substrate binding energy and activation energy for, **290**, 494

Oligo/poly  $\alpha$ ,8-deaminoneuroaminic acid

- detection on ceruloplasmin, **295**, 597

## Oligosaccharide binding sites

- two sets, in domain-swapped dimer of cyanovirin-N in solution, **298**, 598

## Oligosaccharides

- globo-series, synthesis, bacterial *N*-acetylgalactosaminyltransferase with potential for, **295**, 1
- hydrolysis by salivary amylase, mechanism: role of subsite S2' residues, **292**, 468
- peptic, effects on physiological responses of chilling injury in discs excised from zucchini, **290**, 577
- structurally related to repeating unit of pullulan, enzymatic synthesis and characterization, **297**, 382

## Oligosaccharyltransferase complex

- OST48 subunit, Lys3 and Lys5 substitution by His or Arg, effects on protein localization to endoplasmic reticulum, **291**, 751

## Olopatadine

- interactions with S100 proteins, **292**, 1023

## Omeprazole

- CYP1A1/1A2* induction by, effect of  $\alpha$ -naphthoflavone, **296**, 172

## OmpA

- function in *Escherichia coli*, **292**, 396



- OmpC  
role in viability of *Escherichia coli* cells, **299**, 252
- Oncogenesis  
role of Act1, **296**, 406
- ONECUT  
OC-3 characterization, **292**, 848
- One-electron oxidation  
photo-Fenton reagents, and inhibition of lipid peroxidation, **299**, 155
- Oocytes  
Ca<sup>2+</sup> response to cyclic ADP-ribose during maturation and fertilization (starfish), **290**, 1015  
cDNA library, *IF3* gene isolated from, high-level expression in murine liver and ovary, **297**, 323  
functional characterization of mouse cation transporter mOCT2 compared with mOCT1 (*Xenopus laevis*), **296**, 644  
mollusk, sperm-attracting peptide released by, **296**, 1186  
preimplantation, *Oct-3/4* and *c-mos* genes in, inactivation using short interfering RNAs (mouse), **296**, 1372  
rat CLC-7 expressed in, activation by acidic pH (*Xenopus laevis*), **291**, 421  
TRP5 expressed in, coupling to prostaglandin E receptor EP<sub>1</sub> (*Xenopus laevis*), **298**, 398  
*Xenopus*, rapid inactivation of human and rodent epithelial Ca<sup>2+</sup> channels due to single amino acid mutation, **291**, 278
- Oogenesis  
rDNA transcription during, analysis (*Xenopus laevis*), **290**, 1151  
regulated localization of Orb by Dmnk in, implications of physical interactions of Orb and Dmnk, **290**, 225
- Open reading frame *YNL065w*  
yeast plasma membrane transporter gene *AQR1* conferring mono-carboxylic acid/quinidine resistance, **292**, 741
- μ-Opioid receptor  
endomorphin 2 binding to, effects of side chain modifications in endomorphin 2, **290**, 153
- Opsin  
red/green, missense gene mutations in congenital color vision deficiencies, **294**, 205  
vertebrate ancient opsin isoform Pal-VAM in smelt *Plecoglossus altivelis*, **290**, 280
- Optical tweezers  
in direct quantitation of type I collagen monomer flexibility, **295**, 382
- Optimum energy retention  
systems approach to evolution, editorial, **297**, 689
- Optineurin  
expression, effects of elevated intraocular pressure, **298**, 67
- Orb  
physical interactions with Dmnk (*Drosophila melanogaster*), **290**, 225
- Orct*  
*Drosophila*, and mammalian carnitine transporters, human cDNAs homologous to, **297**, 1159
- Orexin 2 receptor  
role in activation by orexins of histaminergic neurons, **290**, 1237
- Orexins  
activation of histaminergic neurons via orexin 2 receptor, **290**, 1237  
glucocorticoid modulation of hypothalamic hypocretin/orexin mRNA expression, **296**, 129  
stimulation of [<sup>35</sup>S]GTPγS binding in Hcrt 2-transfected cell lines and in brain homogenates, **294**, 615
- ORF2 gene  
role in construction of high-order structure of bacterial cellulose, **295**, 458
- Organ culture  
testis fragment, spermatogonial proliferation and differentiation in, effect of rhSCF (newt), **294**, 695
- Organic anions  
transport by ABCA8, **298**, 41
- Organic anion transporters  
differential gene expression in male and female rats, **290**, 482
- Organic cation transporter  
mouse, mOCT2, functional characterization compared with mOCT1, **296**, 644
- Organic chemical systems  
systems approach to evolution, editorial, **297**, 689
- Organic ion transporters  
human cDNAs homologous to *Drosophila Orct* and mammalian carnitine transporters, **297**, 1159
- Organic peroxides  
gene expression induced by, and effects on *Xanthomonas campestris*, roles of alkyl hydroperoxide reductase and Ohr, **299**, 177
- Organonitrogen  
isolation and characterization of *Sphingomonas* sp. GTIN11 capable of carbazole metabolism in petroleum, **297**, 242
- Organotypic culture  
thyroid tissue: maintenance of three-dimensional follicles with C cells for long term, **294**, 906
- Ornithine/citrulline transporter  
mitochondrial, mRNA levels in hepatocytes, hormonal induction, **294**, 749
- Ornithine decarboxylase  
degradation in *Saccharomyces cerevisiae*, role of ubiquitin, **293**, 139  
ovarian, preovulatory rise of, requirement for progesterone secretion by corpus luteum, **293**, 106
- Orphan genes  
*Buchnera* sp. APS, experimental validation, **292**, 263
- Orphanin FQ/nociceptin receptors  
and morphine receptors, dimerization, **297**, 659; *erratum*, **298**, 456
- Oscillatory shear  
effects on endothelial hydraulic conductivity and nitric oxide levels, **293**, 1466
- OSH3*  
two-hybrid cloning and characterization: yeast oxysterol-binding protein homolog, **293**, 733
- Osmolarity  
alterations in, effects on matrix protein gene expression in intervertebral disc cells, **293**, 932
- Osmotic conditions  
regulation of *csmA* gene translation as single polypeptide (*Aspergillus nidulans*), **298**, 103
- Osmotic resistance  
high-density erythrocytes in transglutaminase 2-deficient mice, **291**, 1123
- Osmotic shock  
glucose transport stimulated by, impairment by glucosamine, **292**, 308
- OsMSRMK2*  
isolation: rice multiple stress-responsive MAP kinase gene, **294**, 1009
- Ossification  
endochondral heterotopic, inhibitory effect of basic fibroblast growth factor, **293**, 680
- OST48  
Lys3 and Lys5 substitution by His or Arg, effects on protein localization to endoplasmic reticulum, **291**, 751
- Osteoarthritis  
cartilage in, enhanced chitinase 3-like 2 gene vs chitinase 3-like 1 gene expression (human), **299**, 109
- Osteoblastic cells  
primary, osteoclast formation in, role of interaction between thyroid hormones and 1,25(OH)<sub>2</sub>D<sub>3</sub>, **291**, 987
- Osteoblast-like cells  
osteoprotegerin synthesis and secretion in, mediation by protein kinase C (SaOS-2 cells), **290**, 42

- Osteoblasts**  
 apoptotic, effect of 1,25-dihydroxyvitamin D<sub>3</sub> with and without E<sub>2</sub>, **299**, 446  
 calvarial  
   expression of functional GABA<sub>B</sub> receptors in vitro, **293**, 1445  
   proliferative cultured, cell death by pyruvate deficiency, **294**, 1177  
 CBFA1/RUNX2 expression and DNA binding to osteocalcin promoter, effects of TWIST inactivation, **297**, 641  
 cyclooxygenase-2 expression, induction by fluid flow via PKA signaling pathway (MC3T3-E1 cells), **297**, 46  
 differentiation  
   interleukin-6 and osteoprotegerin synthesis during, regulation by isoflavones via estrogen receptor-dependent pathway, **295**, 417  
   negative regulation by NF-κB: Saos-2 cell malignant reversion by NF-κB inhibition, **297**, 237  
   p73-dependent *DAN* expression during, **295**, 501  
   stimulation by T-614 in vitro, **299**, 903  
 differentiation into, induction by transcription factor decoy against estrogen receptor α gene, **292**, 761  
 effects of targeted overexpression of pleiotropin, **298**, 324  
 estrogen activation of cyclin-dependent kinases 4 and 6 via cyclin D induction (rat), **299**, 222  
 glutamate release, facilitation by ionotropic glutamate receptors, **297**, 452  
 neutrophil adherence to, promotion by microcrystals and f-Met-Leu-Phe (human), **296**, 759  
 osteoprotegerin production in primary culture, stimulation by pamidronate and zoledronic acid (human), **291**, 680  
 physiology, extracellular NAD<sup>+</sup> as autocrine/paracrine signal in, **299**, 424  
 RANKL production, stimulation by histamine, **298**, 240  
 transduction of TAT fusion proteins into, **299**, 505  
 transforming growth factor β<sub>1</sub> binding to, augmentation by 1α,25-dihydroxyvitamin D<sub>3</sub>, **290**, 1558
- Osteocalcin**  
 plasma levels, fall during starvation of male mice, prevention by leptin, **295**, 475
- Osteocalcin promoter**  
 binding by Cbfa1 in osteoblasts, effects of TWIST inactivation, **297**, 641
- Osteoclast differentiation factor**, *see* RANKL
- Osteoclastogenesis**  
 augmentation by vitamin D<sub>3</sub> via vitamin D-responsive element of mouse RANKL gene promoter, **290**, 650
- Osteoclasts**  
 bone-resorbing, intracellular membrane trafficking pathways in, **293**, 1060  
 differentiation and resorbing activity in vitro, reduction by lactoferrin, **296**, 261  
 (–)-epigallocatechin-3-gallate-induced cell death, mechanism, role of Fenton reaction, **292**, 94  
 formation, role of interaction between thyroid hormones and 1,25(OH)<sub>2</sub>D<sub>3</sub>, **291**, 987  
 oxytocin receptor expression (human), **297**, 442  
 protease expression in vitro, regulation by osteoprotegerin, **293**, 38  
 protein prenylation, inhibition by bisphosphonate NE21650, **290**, 869  
 RANKL gene expression, epigenetic control (mouse), **293**, 126  
 transduction of TAT fusion proteins into, **299**, 505
- Osteogenesis**  
 associated genes in human mesenchymal stem cells in vitro, screening by cDNA microarray, **290**, 381  
 enhancement with helper-dependent adenoviral transfer of BMP-2, **297**, 523
- Osteopetrosis**  
 in *tl* rat, role of mutation in macrophage colony-stimulating factor gene *Csfl*, **294**, 1114
- Osteopontin**  
 expression in smooth muscle cells, effect of TGF-β receptor-binding peptides, **293**, 1279
- Osteoporosis**  
 genome-wide multilocus analysis, **295**, 771
- Osteoprogenitor cells**  
 adenoviral BMP-2 gene transfer in mesenchymal stem cells, **292**, 144  
 human, immunoselection and adenoviral genetic modulation: bone formation on PLA scaffolds in vivo, **299**, 208  
 review of bone tissue engineering, **292**, 1
- Osteoprotegerin**  
 gene expression in human aortic smooth muscle cells, inhibition by activation of PPARγ, **294**, 597  
 gene promoter region, single nucleotide polymorphism in, relationship to vascular morphology and function (human), **293**, 13  
 production by primary osteoblasts, stimulation by pamidronate and zoledronic acid (human), **291**, 680  
 regulation of protease expression in osteoclast cultures, **293**, 38  
 secretion from prostate cancer, stimulation by cytokines in vitro, **293**, 451  
 synthesis during osteoblast differentiation, regulation by isoflavones via estrogen receptor-dependent pathway, **295**, 417  
 synthesis and secretion in osteoblast-like cells, mediation by protein kinase C, **290**, 42
- Osteosarcoma**  
 spontaneous, in pet dog, role of angiostatin, **292**, 886
- Osteosarcoma cells**  
 adhesion to 70-kDa core region of thrombospondin-1, mediation by α4β1 integrin, **293**, 86  
 fibroblast growth factor receptor 3 soluble isoform, identification and characterization (SaOS-2 cells), **292**, 378  
 4-hydroxynonenal cytotoxicity and cytostatic effects (human), **293**, 1502  
 malignant reversion by inhibition of NF-κB, **297**, 237
- Outer root sheath**  
 prostaglandin E<sub>2</sub> receptor subtype expression (mouse), **290**, 696
- Outer root sheath cells**  
 growth in vitro, inhibition by IFN-β secreted from human hair dermal papilla cells, **290**, 1133  
 proliferation stimulated by dermal papilla cells, effect of fibroblast growth factor 5, **290**, 169
- Ovalbumin**  
 MRI signals in lung after challenge with, correlation with inflammation parameters in BAL (rat), **292**, 216
- Ovarian cancer cells**  
 cell cycle, JunD-DNA binding, and DNA synthesis, effect of LH-RH, **294**, 11  
 vascular endothelial growth factor mRNA isoform expression and stability, effects of glucose starvation (mouse), **292**, 860
- Ovarian follicles**  
 TVB death receptor expression (chicken), **291**, 226
- Ovarian granulosa cells**  
 apoptosis and G2/M arrest, induction by bisphenol A, **292**, 456
- Ovary**  
 high-level expression of cell differentiation factor IF3 (mouse), **297**, 323  
 ornithine decarboxylase, preovulatory rise of, requirement for progesterone secretion by corpus luteum, **293**, 106
- Oviduct**  
 gene electroporation in vivo, expression and secretion of human alkaline phosphatase into chicken egg after, **292**, 88  
 gene expression patterns, effects of early developing embryo (mouse), **292**, 564
- Ovoglobulin**  
 from chicken egg whites, protein domain, role in chiral recognition, **295**, 587



- Ovomucoid  
IgG and IgE epitopes, identification and fine mapping, **292**, 1070
- Oxazolidinones  
compounds based on, as aromatase inhibitors, **294**, 380
- Oxazoline  
chiral modification in ascidiacyclamide, production of flat squared conformation, **297**, 143
- Oxidants  
interleukin-10 regulation mediated by, review, **297**, 163
- Oxidation  
lignin peroxidase-promoted, mediation of veratryl alcohol: lifetime of VA radical cation, **293**, 832
- Oxidation products  
transfer to lecithin:cholesterol acyltransferase, detoxification of oxidized LDL by, **291**, 758
- Oxidative damage  
assessment in vivo, implications of loss of oxidized and chlorinated bases in DNA treated with reactive oxygen species, **296**, 883  
DNA strand breaks, potent inhibition by aspirin, **293**, 705  
in vascular smooth muscle cells, protection by chemically induced cellular antioxidants, **292**, 50; *erratum*, **294**, 1192
- Oxidative resistance  
*Agrobacterium radiobacter* N-carbamoyl D-amino acid amidohydrolyase, enhancement, **297**, 282
- Oxidative stress  
arsenic trioxide-induced apoptosis and enhancement by buthionine sulfoxide in hepatocellular carcinoma cell lines, **291**, 861  
*Dunaliella tertiolecta* tolerance of, enhancement by Zn-induced phytochelatin synthesis, **293**, 653  
effects on cell cycle, attenuation by heme oxygenase-1 gene delivery into endothelial cells, **291**, 68  
extra- and intracellular cysteines as targets for, in activation of RET kinase, **292**, 826  
generated by oxidized LDL, induction of p21<sup>waf1</sup> and retinoblastoma tumor suppressor protein, **293**, 1327  
H<sub>2</sub>O<sub>2</sub>-induced AP-1 activation and effect on p21<sup>WAF1/CIP1</sup>-mediated G2/M arrest in p53-deficient human lung cancer cells, **293**, 1248  
induction by ciprofloxacin (*Staphylococcus aureus*), **297**, 1003  
induction of  
Ets-2, implications for Down's syndrome, **287**, 1003; *erratum*, **291**, 191  
*GADD153* gene in vascular smooth muscle cells, mechanism, **290**, 1255  
ionizing radiation-induced, upregulation of peroxiredoxin I and II in testis (mouse), **296**, 337  
light-induced, photo-Fenton reagents as hydroxyl radical sources for studies of, comparison, **299**, 155  
role in integrity and function of RBCs from NIDD patients, and N-acetylcysteine effects, **290**, 1393  
transcriptional activation by SoxS in *E. coli* in response to, pre-recruitment as mechanism of, **291**, 979; *erratum*, **294**, 1191  
tyrosine phosphorylation of clathrin heavy chain under, **297**, 353  
in vitiligo: H<sub>2</sub>O<sub>2</sub> and pterin-6-carboxylic acid production by pterin photooxidation, **292**, 805
- Oxidoreductase  
plasma membrane, activity in circulating lymphocytes from insulin-dependent diabetes mellitus patients, **290**, 1589
- Oxidoreductive modification  
two cysteine residues in paired domain by Ref-1, regulation of DNA-binding activity of Pax-8, **297**, 288
- 8-Oxo-7,8-dihydroguanine  
DNA containing, preferential binding of human mitochondrial transcription factor A to, **295**, 945
- 2-Oxoglutarate  
conversion, effects of active site mutations of recombinant deacetoxycephalosporin C synthase, **292**, 66
- 2-Oxoglutarate:ferredoxin oxidoreductase  
five-subunit-type, from *Hydrogenobacter thermophilus* TK-6, **292**, 280
- 12-Oxo-phytodienoic acid  
burst in rice seedling leaves upon wounding by cut and chitosan treatment, **295**, 1041
- Oxygen  
consumption in 5-HT<sub>2C</sub> receptor mutant mice, **295**, 249  
hemoglobin affinity for, alterations in model mice for Presbyterian hemoglobinopathy, **295**, 869  
hyperbaric, selective induction of angiopoietin-2 in human umbilical vein endothelial cells, **296**, 710  
and iron, in insects: Konrad Bloch special issue, **292**, 1191  
low fractions, increase of CO affinity for hemoglobin at, **295**, 975  
role in S-nitrosocysteine stimulation of pentose phosphate pathway in erythrocytes (human), **294**, 829  
singlet, quenching by curcumin, **295**, 62
- Oxygenase activity  
Rubisco, potential of sugars to curtail, **298**, 247
- Oxygenation  
in cholesterol biosynthesis, first step of, Konrad Bloch special issue, **292**, 1283  
selective, N-arachidonylglycine by cyclooxygenase-2, **296**, 612
- Oxygen probe  
phosphorescent, PdTCPPNa, analysis of effects of NO synthesis and mitochondrial respiration on PO<sub>2</sub> using, **290**, 97
- Oxygen radicals  
generation by mammalian purple acid phosphatase, relationship to phosphatase activity, **292**, 128
- Oxygen reductase  
*Synechocystis* A-type flavoprotein, module fusion in, condensation of multiple-component pathway in single polypeptide chain, **294**, 82
- Oxygen-regulated genes  
expression, hypoxic induction in mitochondrial DNA-depleted HeLa cells, **297**, 346
- Oxygen sensing  
acute, in model airway chemoreceptors, lack of role of mitochondrial electron transport, **291**, 332
- Oxygen tension  
and arteriovenous carboxyhemoglobin difference in critical illness, **299**, 479  
intracellular, effects of NO synthesis and mitochondrial respiration, **290**, 97  
regulation of blood-brain barrier maturation, **290**, 325
- Oxygen transfer  
molybdenum role in, **292**, 293
- Oxyhemoglobin  
visible region magnetic circular and magnetic linear dichroism spectra, **297**, 220
- Oxysterol-binding protein  
yeast homolog *OSH3*, two-hybrid cloning and characterization, **293**, 733
- Oxysterols  
effects on expression of phenobarbital-inducible cytochromes P450, **291**, 378  
LXR $\alpha$ /RXR activated by, induction of hSR-BI-promoter activity in hepatoma cells and preadipocytes, **299**, 916
- Oxytocinase  
human placental, gene transcription regulation by AP-2 and Ikaros, **290**, 1048
- Oxytocin receptor  
expression in osteoclasts (human), **297**, 442
- P
- PI' specificity  
tobacco etch virus protease, **294**, 949



- P2  
proteolipidic vectors based on, for gene transfer to lung: DNA binding peptide, **290**, 1489
- P2X receptor  
zebrafish orthologs of mammalian P2X<sub>4</sub> and P2X<sub>5</sub> subunits, cloning and characterization, **295**, 849
- P2X<sub>1</sub> receptor  
subunit contribution to gating, analysis with dominant negative PKC mutant, **291**, 611
- p14<sup>ARF</sup>  
overexpression mediated by recombinant adenovirus, effect on breast cancer cell sensitivity to cisplatin, **296**, 792  
transcriptional regulation by E2F1, E2F2, E2F3, and Sp1-like factors, **291**, 1138
- p15<sup>INK4b</sup>  
related gene P15RS, identification and effects on G<sub>1</sub>/S progression, **299**, 880
- P15RS gene  
identification and effects on G<sub>1</sub>/S progression, **299**, 880
- p16<sup>INK4A</sup>  
Rb/p16<sup>INK4A</sup> pathway, inactivation, requirement for immortalization of human mesenchymal stem cells, **295**, 354
- P18  
salt resistance and synergistic effect with vancomycin:  $\alpha$ -helical antimicrobial peptide, **290**, 558
- p19<sup>ARF</sup>  
induction of p53-independent apoptosis, **295**, 621
- p21  
effects of subcellular localization of HCV core protein on ability for p53 activation and p21 suppression, **294**, 528  
endogenous expression in HepG2 cells, effects of HCV core protein and innate form of core protein, **294**, 521  
expression after exposure to power frequency magnetic fields in Ku80-deficient xrs5 cells, **292**, 355  
induction by hygrolidin, effect on cell cycle progression and G1 and S phases, **298**, 178  
ubiquitination, regulatory region required for, **293**, 120
- p21-activated kinase  
phosphorylation of CPI17 and myosin-binding subunit of PP1 (rat), **297**, 773  
stimulation by lysophosphatidic acid in vascular smooth muscle cells, **291**, 687
- p21<sup>CIP1</sup>  
expression, induction by fibroblast growth factor receptor 3 isoforms, **290**, 113
- p21<sup>Cip1</sup>  
transcriptional activation by Drm/Gremlin, mechanism and effect on neoplastic transformation, **295**, 1135
- p21<sup>WAF</sup>  
p53–p21<sup>WAF</sup>–Bcl-2 network in intestinal epithelial cells, role of Cdx1 homeobox gene, **297**, 607
- p21WAF1  
relationship to breast carcinoma apoptosis (MCF-7 cells), **297**, 943
- p21<sup>waf1</sup>  
induction by oxidized low-density lipoprotein, **293**, 1327
- p21<sup>WAF1/Cip1</sup>  
upregulation prior to TNF-induced necrosis-like cell death, **294**, 672
- p21<sup>Waf1/Cip1</sup>  
expression in Caco-2 cells, effect of vitamin D analog ZK 156718, **290**, 504
- p21<sup>WAF1/CIP1</sup>  
G2/M arrest mediated by, in p53-deficient human lung cancer cells, effect of H<sub>2</sub>O<sub>2</sub>-induced AP-1 activation, **293**, 1248
- p24<sup>gag</sup>  
HIV-1, N-terminal proline of, acid-labile formylation, detection by proteomics using 2D gel and MALDI-TOF-MS, **293**, 1107
- p25  
formation by p35 cleavage, role in tau hyperphosphorylation, **298**, 693
- p27<sup>BBP</sup>/eIF6  
role in nuclear matrix filament formation, **295**, 295
- p27<sup>Kip1</sup>  
expression in Caco-2 cells, effect of vitamin D analog ZK 156718, **290**, 504
- p29  
murine gene encoding, cloning, expression, and genomic organization, **299**, 241
- p34  
from *Trypanosoma brucei*, association with 5S rRNA, **290**, 569
- p35  
cleavage to p25, role in tau hyperphosphorylation, **298**, 693
- p37  
from *Trypanosoma brucei*, association with 5S rRNA, **290**, 569
- p38 MAP kinase  
activation  
by boswellic acids in isolated PMNL, **290**, 185  
induction of cell cycle arrest by Raf/ERK pathway inhibition during muscle differentiation, **298**, 765  
iNOS activation by, role in salivary mucin synthesis inhibition by *Porphyromonas gingivalis* LPS, **297**, 1149  
p38 $\alpha$  splice variant Exip, induction of earlier onset of apoptosis in HeLa cells, **291**, 838  
phosphorylation induced by, functional regulation of TEL, **299**, 116  
and Rac, role in activation of NADPH oxidase in neutrophils (bovine), **293**, 1571  
role in  
CREB DNA binding activation by 50-Hz magnetic field, **296**, 1013  
dilinoleoylphosphatidylcholine effect on LPS-induced TNF- $\alpha$  generation in Kupffer cells of ethanol-fed rats, **294**, 849  
disruption of gastric mucin synthesis by *Helicobacter pylori* lipopolysaccharide, **294**, 220  
 $\beta_1$ -integrin activation by hypoxia in human vascular smooth muscle cells, **296**, 890  
MHC class II-mediated signal transduction in resting B cell line, **291**, 139  
muscle cell response to physical injury in vitro, **293**, 112  
stimulation of hepatocyte growth by EGF and G-protein-coupled receptor agonists, **291**, 588  
signaling module, assembly of components of, role of phospholipase C- $\beta_2$ , **293**, 647
- p42/44 MAP kinase, *see* Extracellular signal-regulated kinase, ERK1/2
- p47<sup>phox</sup>  
recombinant, Caco-2 cell-expressed p67<sup>phox</sup> homolog with, conferral of O<sub>2</sub><sup>-</sup>-reconstituting ability to cytochrome b<sub>558</sub>, **296**, 1322
- p53  
age-dependent gene expression, analysis by oligonucleotide microarray data mining, **298**, 772  
antibodies, comparison in immunoblotting, **293**, 850  
apoptosis independent of, induction by p19<sup>ARF</sup> tumor suppressor, **295**, 621  
CH2 domain as p53-interacting domain of CBP, **296**, 118  
codon 72 genotype, effects on apoptosis by cytosine arabinoside in blood leukocytes, **299**, 539  
C-terminal peptide, hydrophobicity, correlation with carrier-mediated membrane transduction and apoptosis, **298**, 439  
effects of subcellular localization of HCV core protein on ability for p53 activation and p21 suppression, **294**, 528  
endogenous expression in HepG2 cells, effects of HCV core protein, **294**, 521  
expression after exposure to power frequency magnetic fields in Ku80-deficient xrs5 cells, **292**, 355

- human lung cancer cells deficient in, H<sub>2</sub>O<sub>2</sub>-induced AP-1 activation and effect on p21<sup>WAF1/CIP1</sup>-mediated G2/M arrest, **293**, 1248
- inhibition of Adriamycin-induced downregulation of cyclin D1 expression in human cancer cells, **290**, 1101
- p53–p21<sup>WAF</sup>–Bcl-2 network in intestinal epithelial cells, role of Cdx1 homeobox gene, **297**, 607
- PTEN gene promoter site binding to, location, **292**, 422
- senescence dependent on, versus apoptosis, promotion by Bcl-2 without effecting G1/S transition, **298**, 282
- transcriptional activation of human stress-inducible transcriptional repressor ATF3, **297**, 1302
- transgenic mice with p53 knockout, immortal hepatocytes derived from, **294**, 864
- tumor suppressor pathway restoration in cervical carcinoma cells by sodium arsenite (human), **293**, 298
- p53  
somatic mutations, role in extension of replicative life span of macaque cells, **295**, 644
- p57<sup>Kip2</sup>  
pro-apoptotic effect on staurosporine-induced apoptosis in HeLa cells, **296**, 702
- p59<sup>scr</sup>  
expression at specific stages of spermatogenesis (mouse), **292**, 992
- p67<sup>phox</sup> homolog  
Caco-2 cell-expressed, with recombinant p47<sup>phox</sup>, giving O<sub>2</sub><sup>•</sup>-reconstituting ability to cytochrome b<sub>558</sub>, **296**, 1322
- p70 ribosomal S6 kinase  
activity in adipocytes, effects of pancreastatin (rat), **299**, 525  
signaling pathway, molecular crosstalk with MAPK cell signaling pathway, **293**, 463
- p73  
DAN expression dependent on, during cisplatin-induced cell death and osteoblast differentiation, **295**, 501
- p85  
Ca<sup>2+</sup>/calmodulin-dependent binding to G-actin: regulation of cytokinesis initiation in *Tetrahymena*, **292**, 1098  
SH2 domains, phosphorylation-independent sites on, binding of A-Raf kinase, **290**, 1267
- p107  
and p130, expression, and adipogenic potential in primary myoblasts based on age, **296**, 1340  
p130:p107 switch, role of specific degradation of p130 by 26S proteasome, **290**, 1066
- p110  
schwannomin interactions with, effects of Nf2 missense mutations, **290**, 366
- p110δ  
phosphoinositide 3-kinase, detection in human platelets, **296**, 178
- p130  
proteasomal degradation during adipocyte differentiation, **290**, 1066
- p130Cas  
association of human endothelial Pyk2 with, **290**, 1470  
fibroblasts deficient in, gene expression profile, **294**, 635
- p130/p107  
expression, and adipogenic potential in primary myoblasts based on age, **296**, 1340
- P-670  
compound III-mediated formation, inhibition by hypaphorine, **294**, 553
- PACAP, *see* Pituitary adenylate cyclase-activating polypeptide
- PACE4A  
autocatalytic activation coupled with secretion, role of C-terminal region, **290**, 878
- Paclitaxel  
breast cancer MCF-7 cells resistant to, levels of tyrosinated α-, β<sub>III</sub>-, and β<sub>IV</sub>-tubulin isotypes in, **293**, 598
- induction of prolonged mitotic arrest, Bcl-2 dephosphorylation after, role of PP1 phosphatase, **294**, 504
- inhibition of gastric cancer cell growth, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480
- Pain  
suggested role for CLC-7, **291**, 421
- Paired domain  
two cysteine residues in, oxidoreductive modification by Ref-1, regulation of DNA-binding activity of Pax-8, **297**, 288
- Palmitoylation  
defective asialoglycoprotein receptors, normal and defective characteristics (SK-Hep-1 cells), **297**, 980  
surfactant protein C proprotein mutants, differential effects of brefeldin A, **290**, 532
- Palmitoylcarnitine  
modulation of interaction of protein kinase C γ and GAP-43, **294**, 823
- Pamidronate  
stimulation of osteoprotegerin production by primary osteoblasts (human), **291**, 680
- Pancaspase inhibitor  
zASP-CH<sub>2</sub>-DCB, cellular mechanism reversibly inactivating: discrepancy with in vitro and in vivo caspase assays, **291**, 1022
- Pancreas  
with acute pancreatitis, vacuole membrane protein 1 gene in, cloning and expression (rat), **290**, 641  
BACE1 splice variants, identification (human), **293**, 30  
regeneration, mRNA expressed during, identification by mRNA differential display (rat), **299**, 806
- Pancreastatin  
activation of protein synthesis signaling cascade in adipocytes (rat), **299**, 525
- Pancreatic beta cells  
apoptosis, roles of saturated and unsaturated fatty acids, **299**, 853  
extracellular acidification in parallel with insulin secretion, cytosensor use (INS-1, HIT-T15), **293**, 1168  
generation of novel type of poorly synchronized Ca<sup>2+</sup> transients in insulin-secreting INS-1 cells, **293**, 842  
glucose-stimulated insulin secretion, role of pyruvate dehydrogenase activation, **291**, 1081  
insulin-like growth factor 1-dependent mitogenic activity, enhancement by PKC ζ (RIN 1046-38 cells), **290**, 85  
interleukin-1β toxicity in, potentiation by fatty acids (INS-1E cells), **296**, 189  
NIT-1 cell line, and islet cells from NOD mice, Fas cell surface trafficking and surface and total expression, **290**, 443  
pdx1 gene promoter regulation, **299**, 277  
regeneration therapy, **296**, 1039  
sequential exocytosis in, visualization (rat), **292**, 980  
tyrosine phosphorylation of clathrin heavy chain under oxidative stress (βTC cells), **297**, 353
- Pancreatic cancer cells  
expression of DNA ligases, effects of cisplatin (MiaPaCa cells), **298**, 537  
genes expressed in, differential display, **293**, 391  
MUC5AC secretion in response to forskolin and VIP (SW1990 cells), **294**, 680
- Pancreatic epithelium  
embryonic, lectin DBA as marker for staining and purification of, **293**, 691
- Pancreatic insulinoma cells  
tyrosine phosphorylation of clathrin heavy chain under oxidative stress (βTC cells), **297**, 353
- Pancreatic islet cells  
from NOD mice, and β-cell line NIT-1, Fas cell surface trafficking and surface and total expression, **290**, 443



- O-linked *N*-acetylglucosamine transferase inhibition by alloxan, **293**, 207
- progenitor, nestin-positive, side population cells defined by ABCG2 expression (human), **293**, 670
- transdifferentiation into hepatocytes and exocrine cells, induction by transgenic expression of FGF8 and FGF10, **292**, 138
- Pancreatic islets
- diabetic GK rat, downregulated expression of exocytotic proteins, **291**, 1038
  - GAD<sub>67</sub> gene transcription, glucose responsiveness of, mediation by PDX-1, **295**, 243
  - glucose-induced insulin secretion, and Ad-mediated overexpression of PDH kinase and PDH phosphate phosphatase, **291**, 1081
  - from hereditary diabetic rats, protein-tyrosine phosphatase  $\sigma$  overexpression and glucose-induced insulin secretion, **291**, 945
  - targeted gene expression measurements, reproducibility (human), **298**, 350
- Pancreatic ribonuclease
- ribonucleolytic activity on double-stranded RNA, role of glycine 38 (human), **297**, 390
- Pancreatic transcription factor
- PDX-1, functional expression and analysis in yeast, **295**, 724
- Pantetheinase
- mammalian, carbon–nitrogen hydrolase domains, squid photoprotein with sequence similarity to, **293**, 874
- Papain
- molten globule state, urea stabilization, **290**, 1441
- PAR3 $\beta$
- localization to tight junctions, **299**, 641
- PAR6
- lack of PAR3 $\beta$  binding to, **299**, 641
- Paralogous genes
- arylamine *N*-acetyltransferases, first description in bacteria, **293**, 783
- Paraoxonase 1
- multiple substrates during oxidation of phosphatidylcholine by peroxynitrite, **290**, 391
  - overexpression in mice and effect on high-density lipoproteins, **290**, 921
- Paraquat
- HeLa cell sensitivity to, effects of VDUP1 mRNA overexpression, **293**, 293
  - oxidative stress caused by, *Dunaliella tertiolecta* tolerance of, effect of Zn-induced phytochelatin synthesis, **293**, 653
- Parathyroid hormone receptor
- mRNA, augmentation by FGF-2 in mouse marrow stromal cells, **290**, 526
- Parathyroid hormone-related protein
- expression in rheumatoid synovial microcirculation (human), **297**, 890
- Parietal cells
- expression of CCK<sub>2</sub> receptor mRNA, **297**, 335
- PARIS-1
- serological cloning: identification as TBC domain-containing immunogenic tumor antigen from prostate cancer cells, **290**, 830
- Parkinson's disease
- sequence analysis of entire mitochondrial genome in, **290**, 1593
- Paromomycin
- sensitivity to, effects of deafness-associated A1555G mitochondrial DNA mutation, **293**, 521
- Parotid acinar cells
- cAMP-regulated exocytosis, role of phospholipase D (rat), **299**, 663
- Parotid secretory protein
- sorting to regulated secretory pathway in endocrine cells, **299**, 98
- Parthenogenetic embryo
- and androgenetic embryo, imprinted genes differentially expressed in, cDNA microarray screening, **290**, 1499
- Parthenolide
- inhibition of interleukin-4-activated Stat6 activity and VCAM-1 expression, **292**, 841
- Particulate methane monooxygenase
- identification as copper-containing enzyme (*Methylosinus trichosporium*), **295**, 182
- Parturition
- in prostaglandin F receptor-deficient mice, apoptosis and related proteins during, **292**, 675
- Paternally expressed genes
- Peg12/Frat3*, in mouse 7C region homologous to Prader–Willi syndrome region, **290**, 403
- Pathophysiological states
- role of uncoupling proteins, review, **293**, 1145
- Pax-2
- interaction with retinoblastoma protein: reversal of RB repression of *Rig-1* promoter, **296**, 1019
- Pax-8
- DNA binding, regulation by oxidoreductive modification of two cysteine residues in paired domain by Ref-1, **297**, 288
- Paxillin
- association of human endothelial Pyk2 with, **290**, 1470
- PBX2
- complex containing, role in activation of *HOX11*, **294**, 23
- pcl*
- encoding of nuclear protein capable of complex interactions (zebrafish), **294**, 456
- PC12 cells
- amyloid  $\beta$  peptide aggregation and neurotoxicity, role of turn formation at positions 22 and 23, **295**, 306
  - clones, TrkA receptor-overexpressing, constitutive TrkA activity, **291**, 972
  - GTP cyclohydrolase I expression, enhancement in V-1-overexpressing PC12D cells, **293**, 962
  - membrane depolarization caused by A $\beta$ 1-42 peptide, mechanism, **293**, 1197
  - neuronal differentiation, inhibition by expanded CTG repeats, **295**, 289
  - secreted CEACAM1 splice variants in, **292**, 749
  - sorting of exocrine secretory protein to regulated secretory pathway in, **299**, 98
- Pck2 signaling
- in *Schizosaccharomyces pombe*, modulation by pleckstrin homology domain interaction with Rkp1/Cpc2, **289**, 987; *erratum*, **290**, 613
- pCLCA1
- mediation of cAMP-dependent chloride conductance in Caco-2 cells, **298**, 531
- Pco proteins
- role in periplasmic copper handling in *Escherichia coli*, **295**, 616
- PDCD4
- upregulation in senescent diploid fibroblasts (human), **293**, 617
- PDE8B*
- genomic organization, chromosomal localization, and alternative splicing (human), **297**, 1253
- PKD1, *see* 3-Phosphoinositide-dependent protein kinase 1
- PDMP, *see* 1-Phenyl-2-decanoylamino-3-morpholino-1-propanol
- Pdr1p
- PDR5* and *TPO1* gene transactivation mediated by, role in yeast resistance to chlorinated phenoxyacetic acid herbicides, **292**, 530
- PDR5*
- Pdr1p-mediated transactivation, role in yeast resistance to chlorinated phenoxyacetic acid herbicides, **292**, 530
- pdx1*
- promoter, regulation in pancreatic  $\beta$ -cells, **299**, 277
- PDX-1
- functional expression and analysis in yeast, **295**, 724



- mediation of glucose responsiveness of GAD<sub>67</sub> gene transcription in islets of Langerhans, **295**, 243
- PDZ domain
- Rho guanine nucleotide exchange factors containing, interaction with plexin-B1, **297**, 32
  - role in binding of mammalian homolog of *Drosophila* Disks Large to ribosome receptor, **294**, 1151
  - $\beta$ 2-syntrophin containing, complex of ABCA1 C-terminus and utrophin with, **293**, 759
  - TIP-2/GIPC with, interaction with 5T4 with implications for metastasis, **290**, 1030
- Pectobacterium chrysanthemi* PY35
- CelSZ from, activity enhancement by removal of part of C-terminal domain, **291**, 425
- Pediocin-like peptides
- leucocin C, complete amino acid sequence, **295**, 826
- Peg12/Frat3
- paternal expression in mouse 7C region homologous to Prader-Willi syndrome region, **290**, 403
- Penicillin acylase
- substrate specificity (*Streptomyces lavendulae*), **291**, 593
- Penicillin amidase
- pre-pro protein targeting to Tat translocation machinery by unusual signal peptide (*Escherichia coli*), **291**, 146
- Penicillin-binding protein 5
- C-terminal membrane anchoring (*Escherichia coli*), **290**, 427
- Penicillin G
- effect on cell wall lysis and membrane potential in *Streptomyces griseus*, **290**, 1169
  - oxidation, effects of active site mutations of recombinant deacetoxycephalosporin C synthase, **292**, 66
- Penicillin N
- oxidation, effects of active site mutations of recombinant deacetoxycephalosporin C synthase, **292**, 66
- Penis
- cavernous tissue and cultured smooth muscle cells, vascular endothelial growth factor induction of IP-10 expression (rat), **292**, 79
- Pentachlorophenol
- Euglena gracilis* CYP-450 induced by, constitutive expression of immunoidentical forms, **298**, 277
  - monooxygenase degrading, in *Pseudomonas* sp. from chemostat, gene cloning and characterization, **290**, 770
- Pentachlorophenol 4-monooxygenase
- subcellular localization in *Sphingobium chlorophenolicum*, **299**, 703
- Pentaerythrityl trinitrate
- antioxidant effects, role of heme oxygenase-1 induction, **290**, 1539
- 5,6,7,3',4'-Pentamethoxyflavone
- reversal of P-glycoprotein-mediated multidrug resistance, **295**, 832
- Pentapeptide amides
- interference with  $\beta$ -amyloid peptide aggregation in Alzheimer's disease, **292**, 931
- Pentose phosphate pathway
- O<sub>2</sub>-dependent stimulation by S-nitrosocysteine in erythrocytes (human), **294**, 829
- Peptic oligomers
- effects on physiological responses of chilling injury in discs excised from zucchini, **290**, 577
- Peptidases
- neprilysin/CD10, folding of, role of C-terminal cysteines, **295**, 423
- Peptide analysis
- DRY motif in  $\alpha$ 2A adrenergic receptor, **293**, 1233
- Peptide deformylase
- from *Leptospira interrogans*, enzymatic properties, **295**, 884
- Peptides
- aggregate-binding, phage display-selected, manipulation of unfolding-induced protein aggregation, **291**, 903
  - amidicin, with C-terminal amide structure, identification (porcine cardiac atrium), **293**, 741
  - antimicrobial, *see* Antimicrobial peptides
  - D- $\beta$ -aspartic acid-containing, in elastic fibers of sun-damaged skin, **294**, 1047
  - chimeric, reticulated, derived from maurotoxin and Tsk scorpion toxins, synthesis, 3D structure, and pharmacology, **291**, 640
  - domains in interface region binding thymidylate synthase mRNA, identification, **297**, 24
  - enzymatic attachment of glycosaminoglycan chains, carriers for, **293**, 220
  - fungicidal PMAP-23-based analogs, design, **293**, 231
  - hBD-1(Ser35) derived from DEFBI polymorphism, structural and functional characterization, **293**, 586
  - HIV-1 Vif-derived, inhibition of drug-resistant HIV proteases, **292**, 832
  - hydrophobic, specificity of EF-Tu for, **296**, 749
  - intracellular signal-transducing, derived from  $\beta$ 2-adrenoceptor, solution structure (human), **291**, 1297
  - linear, from scorpion, purification, structure-function analysis, and molecular characterization, **293**, 1514
  - lipopolysaccharide-binding fragment of MD-2, identification, **292**, 880
  - mimicking cleavage products of 26S proteasome, regulatory effects, **295**, 1090
  - related dipeptide and characteristic dipeptide of optimal pH in  $\alpha$ -amylase, **299**, 647
  - synthetic
    - caveolin-3 scaffolding domain, conformation, and deletion of tripeptide sequence found in MD patients, **298**, 203
    - with chicken  $\alpha^D$ -globin residues 1–40, stimulation of lipid kinases and Ca<sup>2+</sup> signaling in *Trypanosoma cruzi*, **293**, 314
    - thiol-bearing, retention of antioxidant activity of apolipoprotein A-I<sub>Milano</sub>, **297**, 206
  - transforming growth factor  $\beta$  receptor-binding, effect on smooth muscle cells, **293**, 1279
  - V3 loop-derived, activation of HIV-1 gp120, **297**, 625
  - vascular permeability-enhancing, release from kininogens by human neutrophil elastase, **294**, 423
- Peptidomimetics
- series active on HIV-1 protease, inhibition of *Candida albicans* secreted aspartic protease, **297**, 1350
- Peptidylarginine deiminase
- nucleophosmin/B23 and histones as targets in HL-60 granulocytes, **290**, 979
- PER2
- upregulation of BMAL1, **290**, 933
- PERC
- and PGC-1, coactivation of estrogen receptor-related receptor  $\gamma$ , **299**, 872
- Perforin
- gene, as direct target of STAT4 activated by IL-12 in NK cells (human), **297**, 1245
- Pericytes
- retinal, *see* Retinal pericytes
- Periostin
- enhanced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635
- Peripheral blood cells
- various types, distribution of TT virus, **290**, 242
- Peripheral blood T cells
- in atopic dermatitis, *ETEA* gene highly expressed in, cloning and characterization, **297**, 1282
- Peripheral tissues
- clocks, entrainment to restricted feeding, role of functional CLOCK, **298**, 198
- Periplasm
- copper handling in, in *Escherichia coli*, role of pco proteins, **295**, 616

- Sphingobium chlorophenolicum*, pentachlorophenol 4-monooxygenase localization to, **299**, 703
- Peritonitis carcinomatosis  
due to hepatoma cells, suicide gene therapy by vector of replicative-deficient herpes simplex virus, **291**, 855
- PERK  
activation, attenuation by familial Alzheimer's disease-linked presenilin-1 mutants, **296**, 313
- Permeability, *see also* Mitochondrial permeability transition; Vascular permeability  
colonic paracellular, reduction by butyrate by enhancement of PPAR $\gamma$  activation, **293**, 827
- Permeabilization  
in 96-well arrays, in measurement of  $\beta$ -galactosidase activity in bacteria, **290**, 397; *erratum*, **292**, 292
- Peroxidase  
horseradish, *see* Horseradish peroxidase
- Peroxidation  
phospholipids in vitro, effect of antioxidant cocktail EM-X, **296**, 1148
- Peroxin  
*PEX7*-encoded, CHO cell mutants defective in, isolation, **293**, 225  
*PEX19* splice variants, distinct functions in peroxisomal assembly (human), **291**, 1180
- Peroxiredoxin  
Prx I and II, differential expression in testis and upregulation by radiation (mouse), **296**, 337
- Peroxisomal bifunctional protein  
induction by peroxisome proliferator, **299**, 832
- Peroxisomal membrane protein 34  
identification as peroxisomal ATP transporter (human), **299**, 494
- Peroxisomal membrane protein 70  
conformation on hepatic peroxisomal membranes, nucleotide-induced changes, **291**, 1245
- Peroxisome proliferator  
delayed induction of  $\Delta$ -5 and  $\Delta$ -6 desaturases, **299**, 832
- Peroxisome proliferator-activated receptor  
activators, inhibition of endothelial cell migration by targeting of Akt, **293**, 1431  
activity in colon tumor cell line HCT 116, suppression by docosahexaenoic acid, **298**, 667  
ligands, effect on Fc $\epsilon$ RI expression in human basophilic KU812 cells, **297**, 193  
regulation of resistin expression, **299**, 291
- Peroxisome proliferator-activated receptor  $\alpha$   
activation, effects on abdominal and skeletal adiposity and insulin sensitivity in OLETF rat, **296**, 293  
agonists, gene expression changes in mouse liver induced by, microarray analysis, **290**, 1114  
fibrate and statins as ligands for and as inducers of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131  
mediation of fenofibrate induction of selective increase of protein-bound homocysteine in rodents, **295**, 1052
- Peroxisome proliferator-activated receptor  $\gamma$   
activation  
enhancement, butyrate reduction of colonic paracellular permeability by, **293**, 827  
inhibition of osteoprotegerin gene expression in human aortic smooth muscle cells, **294**, 597  
fibrate and statins as ligands for and as inducers of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131  
ligands, inhibition of IgE heavy chain germline transcript expression in DND39 B cells, **295**, 547  
production by adipocytes in myostatin knockout mouse, **291**, 701  
role in 15-deoxyprostaglandin J<sub>2</sub> inhibition of PDGF-A and -B chain expression in vascular endothelial cells, **298**, 128  
role in primary monocyte differentiation and foam cell formation, **290**, 707  
splice variants in macrophages, genetic analysis (monkey), **293**, 274  
transient expression, and differentiation of 3T3-L1 preadipocytes, **296**, 125
- Peroxisome proliferator-activated receptor  $\gamma$ 1  
TGF- $\beta$ 1 effect on expression (THP-1 monocytes), **297**, 794
- Peroxisome proliferator-activated receptor  $\gamma$ 2  
TGF- $\beta$ 1 effect on expression (THP-1 monocytes), **297**, 794
- Peroxisome proliferator-activated receptor  $\gamma$  coactivator-1  
mRNA expression in epitrochlearis muscle, effects of low-intensity prolonged exercise (rat), **296**, 350
- Peroxisome proliferator-activated receptor  $\delta$   
fibrate and statins as ligands for and as inducers of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131  
gene characterization (mouse), **290**, 230
- Peroxisomes  
assembly, distinct functions of *PEX19* splice variants in, analysis (human), **291**, 1180  
 $\beta$ -oxidation enzymes involved in leukotriene degradation, identification, **293**, 269  
biogenesis  
CHO cell mutants defective in, isolation, **293**, 225  
*pex2* mutant defective in, catalase-deficient temperature-sensitive import of PTS1 and PTS2, **293**, 1523  
dimethylnonanoyl-CoA thioesterase in, detection, purification, and molecular cloning (rat liver), **290**, 629  
membrane protein Pex16p, aberrant splicing mutation in gene in two patients with Zellweger syndrome, **292**, 109  
membranes, PMP70 on, nucleotide-induced conformational changes (rat liver), **291**, 1245  
ubiquinone biosynthesis (rat liver), **291**, 1128
- Peroxynitrite  
antioxidant enzyme inhibition in skeletal muscle by, specificity, **294**, 1093  
induction of loss of oxidized and chlorinated bases in DNA, implications for assessment of oxidative damage in vivo, **296**, 883  
nitration of folic acid, and selective binding of 10-nitrofolate to folate receptor  $\beta$ , **297**, 1238  
phosphatidylcholine oxidation by, multiple substrates for paraoxonase-1 during, **290**, 391  
removal by creatine, **290**, 47
- Pertussis toxin  
G protein sensitive to, activation of extracellular signal-regulated kinases via, **290**, 539
- PEST-containing nuclear protein  
association with NIRF, **296**, 530
- Petroleum  
carbazole metabolism in, *Sphingomonas* sp. GTIN11 capable of, isolation and characterization, **297**, 242
- PEX7*  
CHO cell mutants defective in, isolation, **293**, 225
- PEX16*  
aberrant splicing mutation in two patients with Zellweger syndrome, **292**, 109
- PEX19*  
splice variants, distinct functions in peroxisomal assembly (human), **291**, 1180
- Peyer's patches  
small intestine, in vitro model of follicle-associated epithelia overlying, evaluation, **299**, 377
- Peyronie's disease  
monocyte chemoattractant protein 1 upregulation and TGF- $\beta$ 1 effects in, **295**, 1014
- PGC-1  
and PERC, coactivation of estrogen receptor-related receptor  $\gamma$ , **299**, 872



## P-glycoprotein

- and ABCG2 and nestin, side population cells in human islet-derived progenitor cells coexpressing, **293**, 670
- function, elevation by catechin in green tea, **297**, 412
- induction, interindividual variability, role of pregnane X receptor splicing variants in liver (human), **298**, 433
- multidrug resistance mediated by, reversal by 5,6,7,3',4'-penta-methoxyflavone, **295**, 832
- N-terminal nucleotide-binding domains, nucleotide triphosphatase activity of, **296**, 388
- upregulation by digoxin in human colon carcinoma Caco-2 cells, **292**, 190

## pH

- acidic, activation of CLC-7 expressed in *Xenopus* oocytes, **291**, 421
- Aspergillus niger* NRRL 3135 phytase catalysis at pH 4.0, enhancement by site-directed mutagenesis, **297**, 1016
- calcium-sensing receptor activation sensitive to, induction by aminoglycoside antibiotics, **297**, 71
- effects on stability of GPI-alkaline phosphatase from bovine intestine, **292**, 874
- extracellular, effect on *Helicobacter pylori*-induced VacA toxin internalization in human gastric epithelial cells, **292**, 167
- extracellular acidification in parallel with insulin secretion in INS-1 and HIT-T15  $\beta$ -cell lines, cytosensor use, **293**, 1168
- increase by egg fucose sulfate polymer, sialoglycan, and speract: effect on sperm acrosome reaction (sea urchin), **296**, 833
- liposomes sensitive to, as carriers of endoplasmic reticulum-targeted drugs in melanoma cells, **293**, 918
- optimal, for  $\alpha$ -amylase, effects of dipeptides, **299**, 647
- profiles, of metal ion-replaced imidase (pig), **297**, 1027
- and thermal stability and folding kinetics of lysozyme, **291**, 795

## ph2

- alternative transcripts, expression in distinct regions of somites during segmentation of zebrafish embryos, **291**, 245

## Phage

- mediated gene transfer, effect of nuclear localization signal, **297**, 779

## Phage display

- cDNA-encoded polypeptides: immunoscreening for identification of B cell targets in autoimmune disease, **298**, 169
- coat protein III from, fusion system with, functional improvement of antibody fragments using, **298**, 566
- improvement of affinity of immunoglobulin E receptor, **293**, 542
- on tracheal epithelial cells, synthesis of proteolipidic vectors for gene transfer to lung using, **290**, 1489

## Phage display library

- aggregate-binding peptides selected from, manipulation of unfolding-induced protein aggregation, **291**, 903
- T7 phage-displayed CV-N mutant library, stable dimeric cyanovirin-N mutant from, **292**, 1036

## Phagocytosis

- and lysosomal characteristics of specific granules of human eosinophils, **291**, 844

*Phanerochaete chrysosporium*

- NADPH-cytochrome P450 reductase, kinetic mechanism, **299**, 189

## Pharmacophore

- motilin, in CHO cells expressing human motilin receptor, **293**, 1223

## Phasein A

- isolation from pinto bean seeds and macrophage-stimulating activity, **290**, 813

## Phasein B

- isolation from pinto bean seeds and macrophage-stimulating activity, **290**, 813

## Phase properties

- effect on solubility of amphiphiles in membranes, **296**, 596

## PHD finger-like motif

- murine multigene family containing, identification and characterization, **293**, 816

## PHD finger protein 5a

- human, *Caenorhabditis elegans* ortholog of, role in morphogenetic development, **297**, 1049

## Phenobarbital

- induction of cytochromes P450, relationship to cholesterol levels, **291**, 378
- mediation of nuclear translocation of cytosolic proteins interacting with hepatic CYP2B1/B2 gene 5'-proximal region (rat), **292**, 312

## Phenylalanine

- role of Phe554 residue in thermal inactivation of protective antigen of *Bacillus anthracis*, **296**, 1058
- tryptophan hydroxylase Phe313, role in determination of substrate specificity, **292**, 639

Phenylalanine arginine  $\beta$ -naphthylamide

- restoration of antibiotic susceptibility to resistant *Enterobacter aerogenes* strains, **293**, 1370

## Phenylalanyl-tRNA synthetase

- identification as substrate of Tk-PTP protein tyrosine/serine phosphatase from *Thermococcus kodakaraensis* KOD1, **295**, 508

- 1-Phenyl-2-decanoylamino-3-morpholino-1-propanol modulation of membrane-bound and soluble CD54 expression in endothelial cells, **296**, 26

## N-Phenyl-1-naphthylamine

- binding by locust chemosensory protein, **293**, 50

Pheochromocytoma PC12 cells, *see* PC12 cells

## Phex

- inhibition of MEPE cleavage, **297**, 38

## PHF5a

- human, *Caenorhabditis elegans* ortholog of, role in morphogenetic development, **297**, 1049

## Phf5a

- in murine multigene family containing PHD-finger-like motif, identification and characterization, **293**, 816

## Phloretin

- antioxidant activity, **295**, 9

4 $\beta$ -Phorbol-12 $\beta$ ,13 $\alpha$ -dibutyrate

- upregulation of astroglial phospholipase D, role of protein kinase C activation, **297**, 545

## Phorbol myristate acetate

- activation of Ras-like small GTP-binding protein Rin, **295**, 651
- differentiation of HL-60 and THP-1 cells induced by, DNase II gene upregulation during, **296**, 48
- effect on sphingosine kinase-dependent directional migration of leukocytes, **297**, 806

## induction of

- ectodomain shedding of nectin-1 $\alpha$  in MDCK cells, **299**, 472
- matrix metalloproteinase-9 secretion in MCF-7 cells by PKC activation of Ras/ERK pathway, **293**, 1174
- mitogenic stimulation, nuclear translocation of hyaluronan binding protein 1/C1QBP/p32 upon, **291**, 829

## Phorbol myristate acetate-responsive element

- role in constitutive expression of mouse *Cypla2* gene, **297**, 1297

## Phosphatase nuclear targeting subunit

- inhibition of retinoblastoma-directed PP1 activity, **297**, 463

## Phosphatases

- inhibition, induction of I $\kappa$ B kinase activation in murine macrophages, **297**, 1264
- nuclear, role in suppression of STAT1 activity in hepatocytes, **299**, 574

## Phosphate contacts

- role in sequence recognition by *EcoRI*, **295**, 198

## Phosphate depletion

- enhancement of bone morphogenetic protein-4 gene expression in cultured mouse marrow stromal ST2 cells, **299**, 395

## Phosphate esters

- of thiamine, and thiamine, simultaneous detection from microalgae by HPLC, **291**, 344



- Phosphatidate kinase  
stimulation in *Trypanosoma cruzi* by synthetic peptide carrying residues 1–40 of chicken  $\alpha^D$ -globin, **293**, 314
- Phosphatidic acid  
formation, relationship to degranulation of stimulated neutrophils, **292**, 951
- Phosphatidylcholine  
 $\delta$ -9 fatty acids containing, oxidation products, impairment of activity of tissue factor pathway inhibitor, **298**, 468  
oxidation by peroxyxynitrite, multiple substrates for paraoxonase-1 during, **290**, 391  
phospholipase C hydrolyzing, downregulation by elicitors in plant cells, **293**, 766  
and sphingomyelin, bilayers of, synergistic perturbation by diacylglycerol and cholesterol, **296**, 806
- Phosphatidylethanolamine  
 $\delta$ -9 fatty acids containing, oxidation products, impairment of activity of tissue factor pathway inhibitor, **298**, 468
- Phosphatidylinositol 3-kinase  
activation, role in ceramide modulation of CYP3A4 expression in colon carcinoma HT-29 cells, **298**, 687  
inhibitors, effects on thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72  
mediation of PDGF-stimulated MMP-3 expression in cells expressing the PDGF receptor, **294**, 231  
p85 SH2 domains, phosphorylation-independent sites on, binding of A-Raf kinase, **290**, 1267
- PI3-K/Akt pathway  
activation in glioma T98G cells, reduction by mutated focal adhesion kinase, **293**, 174  
inhibition, Mcl-1 downregulation by, requirement for cell shrinkage-dependent cell death, **290**, 1275
- role in  
leucine promotion of glucose uptake by skeletal muscle (rat), **299**, 693  
PDGF inhibition of induced MMP-9 expression in C6 glioma cells, **296**, 864  
phosphorylation of Btk and Atk, **293**, 1319  
regulation of resistin expression, **299**, 291  
serum response factor activation dependent on, in estrogen regulation of *c-fos* gene expression in MCF-7 breast cancer cells, **294**, 384  
shear-activation in endothelial cells, role of Cbl, **292**, 892
- Phosphatidylinositol 3-phosphate-3-phosphatase  
myotubularin family members hMTM1, hMTMR2, and hMTMR3 in, potential functional redundancy, **291**, 305
- Phosphodiesterase  
heme-regulated, binding of cyanide, effect of Met95 mutations (*Escherichia coli*), **299**, 169
- Phosphodiesterase 4  
cAMP-specific, inhibitors of, promotion of ABCA1 expression and cholesterol efflux, **290**, 663
- Phosphodiesterase 8B  
gene, genomic organization, chromosomal localization, and alternative splicing (human), **297**, 1253
- Phosphoenolpyruvate carboxykinase  
induction in growth-arrested hepatoma cells, **290**, 1513
- Phosphofructokinase  
muscle, allosteric behavior, role of Ser530, Arg292, and His662 (rabbit), **290**, 670
- 6-Phosphofructo-1-kinase  
structure and activity, effects of C-terminal modification (*Saccharomyces cerevisiae*), **295**, 992
- Phosphoglucosyltransferase  
mutation in *Xanthomonas campestris xanA* gene encoding, and efficiency of bacteriophage L7 adsorption, **291**, 338
- 3-Phosphoinositide-dependent protein kinase 1  
phosphorylation of SGK1, mediation by  $\text{Na}^+/\text{H}^+$  exchanger regulatory factor 2, **298**, 207
- 3'-Phosphoinositide-dependent protein kinase-1  
testis- and brain-specific isoform mPDK-1 $\beta$ , cloning and characterization (mouse), **294**, 136
- Phosphoinositide 3-kinase  
p110 $\delta$  subunit, detection in human platelets, **296**, 178
- Phosphoinositide 3-kinase C2 $\alpha$   
activation upon smooth muscle cell migration and regulation by  $\alpha_v\beta_3$  integrin engagement, **297**, 261
- Phospholipase  
recombinant YplA, active derivatives of, purification and characterization (*Yersinia enterocolitica*), **292**, 463
- Phospholipase A  
upregulation by elicitors in plant cells, **293**, 766  
*Vibrio mimicus*, characterization and cytotoxicity to fish cell line, **298**, 269
- Phospholipase A<sub>2</sub>  
group IIE, arachidonate release and eicosanoid generation by, **292**, 689  
inhibition by uteroglobin, role of uteroglobin  $\alpha$ -helix 3 Lys43 and Asp46, **295**, 877  
interfacial catalysis, kinetics and thermodynamics, analysis by differential scanning calorimetry, **297**, 446  
secretory, deficiency, effect on HDL levels or atherosclerosis in mice, **294**, 88  
surface pressure-dependent modulation by c-Fos, **295**, 964
- Phospholipase B  
expression in epidermis (human), **295**, 362
- Phospholipase C  
phosphatidylcholine-hydrolyzing, downregulation by elicitors in plant cells, **293**, 766  
surface pressure-dependent modulation by c-Fos, **295**, 964
- Phospholipase C- $\beta$ 2  
interaction with mitogen-activated protein kinase kinase 3, **293**, 647
- Phospholipase C- $\gamma$ 1  
C-terminal SH2 domain, AP180 binding to and inhibition of enzymatic activity, **290**, 35  
tyrosine phosphorylation, stimulation by prostaglandin F<sub>2 $\alpha$</sub> , **297**, 1102
- Phospholipase C- $\delta$ 1  
modulation of intracellular  $\text{Ca}^{2+}$ , **293**, 383
- Phospholipase D  
activity in neutrophils, and neutrophil degranulation, differential regulation of, **292**, 951  
elevated activity, induction of apoptosis in normal rat fibroblasts, **298**, 474  
isozymes, dimerization, **290**, 375  
mediation of sulfur mustard-induced arachidonic acid release in keratinocytes (human), **295**, 1062  
regulation of  $\text{Ca}^{2+}$  oscillation frequency and NF- $\kappa$ B activity in histamine-stimulated endothelial cells (human), **292**, 325  
role in cAMP-regulated exocytosis in parotid acinar cells (rat), **299**, 663  
stability in primary astrocytes, **297**, 545
- Phospholipase D1  
dual regulation by protein kinase C  $\alpha$  in vivo, **294**, 1109
- Phospholipase D2  
stimulation of cell protrusion in v-Src-transformed cells, **293**, 201
- Phospholipids  
ABCA1-driven efflux, role of apolipoprotein A-I C-terminal domain, **299**, 801  
peroxidation in vitro, effect of antioxidant cocktail EM-X, **296**, 1148  
rGPIb $\alpha$ -conjugated vesicles with different flexibilities, rolling on vWF surface under flow conditions, **296**, 765

- small unilamellar vesicles of uniform size, preparation and analysis, **296**, 1352
- Phosphomannomutase  
identification as substrate of *Tk*-PTP protein tyrosine/serine phosphatase from *Thermococcus kodakaraensis* KOD1, **295**, 508  
*Xanthomonas campestris xanA* gene encoding, mutation in, and efficiency of bacteriophage L7 adsorption, **291**, 338
- Phospho-p53  
expression after exposure to power frequency magnetic fields in Ku80-deficient xrs5 cells, **292**, 355
- Phosphopeptides  
tools for identification and quantitation, review, **290**, 885
- Phosphoproteome  
tools for quantitative analysis, review, **290**, 885
- Phosphorothioate antisense DNA  
trisamine-modified, selective binding to mRNA, effect on antisense activity and toxicity, **293**, 1341
- Phosphorus  
dietary, role in progression of renal failure, **295**, 917
- Phosphorylase *a*  
activity in skeletal muscle, inverse relationship to glycogen content (mouse), **290**, 874
- Phosphorylation, *see also* Autophosphorylation  
abrogation by nitration of PECAM-1 ITIM tyrosines, **296**, 1171  
acetyl-CoA carboxylase- $\beta$  in muscle during prolonged exercise (human), **298**, 309  
AMP-activated protein kinase  $\alpha$  subunit Thr172, **293**, 892  
 $\beta$ -catenin at GSK-3 priming site Ser45, **294**, 324  
cellular state of, alteration, effect on vitamin D receptor-mediated CYP3A4 mRNA induction in Caco-2 cells, **296**, 182  
cyclin H as binding partner for protein kinase CK2, **296**, 13  
DNA-dependent, proteins in *Arbacia punctulata* eggs, induction by prolonged incubation in seawater, **294**, 667  
Epstein-Barr virus latent membrane protein 1 by protein kinase CK2, **294**, 586  
Erk1/2, role in uPA induction by calcitonin in LLC-PK1 cells, **290**, 1483  
Fanconi anemia protein, regulation by Akt kinase, **291**, 628  
focal adhesion kinase by *c-src*, **294**, 293  
glycogen synthase kinase 3 $\beta$  at serine-9 by serum and glucocorticoid-inducible kinase-like kinase by direct interaction, **293**, 1191  
GSK3 $\beta$ -dependent, cyclin D1 threonine-286, role in proteosomal degradation, **298**, 377  
by I $\kappa$ B kinase catalytic subunits IKK-1 and IKK-2 expressed as homodimers, **293**, 1508  
Jun kinase, relationship to breast carcinoma apoptosis (MCF-7 cells), **297**, 943  
mitosis-dependent, LIM-kinase 1, **290**, 1315  
Net1 by Cdc5 in budding yeast, **294**, 687  
pleckstrin, requirement for pleckstrin translocation, **293**, 640  
SGK1 by PDK1, mediation by Na<sup>+</sup>/H<sup>+</sup> exchanger regulatory factor 2, **298**, 207  
sites in proteome, tools for identification and quantitation, review, **290**, 885  
Src family kinase-dependent, of 29-kDa caveolin-associated protein, **290**, 1447  
tau hyperphosphorylation, role of p35 cleavage to p25, **298**, 693  
TEL by p38, functional regulation of TEL by, **299**, 116  
thrombin-stimulated, of Pyk2 in endothelium, role of intracellular Ca<sup>2+</sup>, PKC, and Src kinases, **294**, 1001  
TonEBP/NFAT5, role of dimerization, **294**, 968  
yeast ribosomal stalk, inhibition by Cu,Zn-superoxide dismutase, **296**, 1310  
Zfhep transcription factor, in cell-specific manner, **296**, 368
- Phosphorylcholine  
recombinant human C-reactive protein binding to, secretory production in *E. coli*, **295**, 163
- Photoaffinity labeling  
G proteins: strain and strain rate activation in human endothelial cells, **299**, 258  
proteins in bovine testis nuclear extract, **297**, 714
- Photobiotin  
based UV irradiation, in covalent DNA immobilization on polymer-shielded silver-coated quartz crystal microbalance, **290**, 962
- Photobleaching  
green fluorescent protein inside live cells in two-photon excitation microscopy, **291**, 1272  
green fluorescent protein-labeled H2AX in chromatin, **297**, 1318
- Photodynamic therapy  
with 5-aminolevulinic acid: protoporphyrin IX photosensitizing effect in pigmented melanoma (mouse), **297**, 468  
human brain tumor cells, with hypocrellin-A and -B, release of angiogenesis regulators after, **298**, 520
- Photo-Fenton reagents  
one-electron oxidation of, and inhibition of lipid peroxidation, **299**, 155
- Photooxidation  
pterins, in vitiligo: production of H<sub>2</sub>O<sub>2</sub> and pterin-6-carboxylic acid, **292**, 805
- Photoprotein  
squid, with sequence similarity to mammalian carbon-nitrogen hydrolase domains, **293**, 874
- Photoreception  
nonvisual: vertebrate ancient opsin isoform Pal-VAM in smelt *Plecoglossus altivelis*, **290**, 280
- Photoreceptors  
differentiation of embryonic stem cells into retinal neurons, **297**, 177  
phytochrome-mediated signal transduction pathways in plants, **298**, 457
- Photorhabdus luminescens*  
generation of thermostable monomeric luciferases from, **296**, 1072
- Photosystem II  
33-kDa protein from, tyrosine-dominated fluorescence emission (spinach), **293**, 593
- Phototoxicity  
UVB-induced, cellular defense against, by cytosolic NADP<sup>+</sup>-dependent isocitrate dehydrogenase, **292**, 542
- phRG-B  
and pRL-TK, in genetic reporter system, effects of Nurrl, **294**, 1036
- pH-sensitive liposomes  
encapsulated with K<sup>b</sup>-restricted CTL epitope, in vivo antigen delivery route and immune boosting effects, **292**, 682
- Phthalate esters  
embryotoxicity, butyrylcholinesterase targeting in, **299**, 659
- phyA* gene  
fungal, cloned and expressed in alfalfa, production of stable phytase, **290**, 1343
- Phylogenetics  
*DAX1* and *SHP* in Nile tilapia, **297**, 632  
H<sup>+</sup>-translocating inorganic pyrophosphatases, protozoan and other, **294**, 567  
New World arenaviruses, based on small genomic segment, **296**, 1118  
soluble Flt-1 in mammals: conservation in avian species, **291**, 554
- Phylogenetic tree  
arylamine *N*-acetyltransferase genes: absence of evidence for horizontal transfer from bacteria to vertebrates, **293**, 783  
ERF/AP2-related proteins, **290**, 998  
extradiol dioxygenases, **294**, 560



- OsMSRMK2*: rice multiple stress-responsive MAP kinase gene, **294**, 1009
- vertebrate opsins including smelt Pal-VAM and Pal-VAL, **290**, 280
- Physical systems
- systems approach to evolution, editorial, **297**, 689
- Phytase
- Aspergillus niger* NRRL 3135, site-directed mutagenesis at residue 300, catalysis effects, **297**, 1016
- stable, production by fungal *phyA* gene cloned and expressed in alfalfa, **290**, 1343
- Phytochelators
- zinc-induced synthesis, enhancement of *Dunaliella tertiolecta* tolerance of heavy metals and oxidative stress, **293**, 653
- Phytochrome
- signal transduction pathways in plants mediated by, **298**, 457
- Phytosphingosine 1-phosphate
- high affinity for SIP<sub>4</sub>/Edg-6 receptor, **297**, 600
- Piceatannol
- attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72
- Picene
- and dibenz[*a,h*]anthracene, comparative carcinogenicity in rat, **290**, 275
- Pichia pastoris*
- hepatitis C virus core protein expressed in, in vitro self-assembly into virus-like particles, **290**, 300
- hepatitis C virus precursor protein expressed in, processing, **295**, 81
- PID261
- yeast, acidophilic character, **296**, 1366
- Pierisin
- apoptotic peptide from cabbage butterflies, editorial, **296**, 1037
- Pierisin-1
- apoptosis induced by, effect of Bcl-2 (HeLa cells), **296**, 20
- Pigment epithelium-derived factor
- opposite effects on endothelial cells of different phenotypes, **294**, 764
- protection of retinal pericytes from advanced glycation end product-induced injury, **296**, 877
- Pinin
- modulation of alternative pre-mRNA splicing in vivo, **294**, 448
- Pioglitazone
- prevention of early-phase hepatic fibrogenesis caused by CCl<sub>4</sub>, **291**, 55
- Pitavastatin
- and fibrates, as ligands for PPAR isotypes and effects on induction of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131
- Pituitary adenylate cyclase-activating polypeptide
- and homologous *Drosophila* memory gene *amnesiac*, higher brain functions of, **297**, 427
- inhibition of CBP–NF- $\kappa$ B interaction in activated microglia, **297**, 1181
- and VIP, effects on MEKK1/MKK4/JNK cascade in endotoxin-activated microglia, **293**, 771
- Pituitary cells
- sorting of exocrine secretory protein to regulated secretory pathway in (GH4C1 cells), **299**, 98
- thyroid hormonal activity of tetrabromobisphenol A and tetrachlorobisphenol A, **293**, 554
- Pituitary gland
- anterior
- GnRH stimulation of annexin 5 mRNA expression in cells, **291**, 915
- steroid modulation of angiotensin II-induced protein kinase C activity, gender differences (rat), **294**, 95
- tissue-specific calpain induction after estrogen treatment, **295**, 261
- hormone release, effects of centrally administered apelin-13 (rat), **291**, 1208
- Pituitary tumor cells
- brefeldin A-induced prosomatostatin N-glycosylation (AtT20 cells), **296**, 618
- Pituitary tumors
- estrogen-induced, tyrosine kinase, effect of angiotensin II and IV (rat), **297**, 931
- Placenta
- $\beta$ 1,3-*N*-acetylglucosaminyltransferase expression, **294**, 843
- cathepsins expressed in, evolution, **293**, 23
- leucine aminopeptidase/oxytocinase gene, transcription regulation by AP-2 and Ikaros (human), **290**, 1048
- Placental growth factor
- loss of, protective effect against vascular permeability in pathological conditions (mouse), **295**, 428
- Plamalogens
- in mononuclear cells, effects of dietary coenzyme Q10, **296**, 255
- Plant cells
- downregulation of phosphatidylcholine-hydrolyzing phospholipase C and upregulation of phospholipase A by elicitors, **293**, 766
- Plant defense
- isolation of pathogen-induced Chinese cabbage genes by subtractive hybridization using selective adaptor ligation, **299**, 352
- Plant homeodomain finger domains
- identification in NYD-SP6 protein, **291**, 101
- Plant virus vector
- ZYMV-AGII, for production of MAP30 and GAP31 in cucurbits, **292**, 441
- Plasma
- retinol binding protein, and urinary RBP, comparative phenotypic analysis using MS immunoassay (human), **297**, 401
- Plasma membrane
- anion channels, overexpressed chloride intracellular channel protein CLIC4 as essential component of, **297**, 317
- antisense oligonucleotide delivery to, two-step model for, **293**, 18
- apparent translocation across, caused by positively charged DNA-binding proteins, **291**, 367
- effect of HP (2–9)–magainin 2 (1–12) hybrid peptide (*Candida albicans*), **297**, 885
- and endoplasmic reticulum, formation of junctional complex between, role of junctophilin type 3 (mouse), **292**, 318
- fiber cell, steroid binding protein-containing, immunomagnetic capture, **295**, 1027
- hepatic, Mg<sup>2+</sup>-dependent neutral sphingomyelinase in, inhibition by ubiquinol, role of isoprenoid chain, **297**, 581
- movement of water-soluble fullerene derivative across, and cellular localization, **294**, 116
- oxidoreductase, enhanced activity in circulating lymphocytes from insulin-dependent diabetes mellitus patients, **290**, 1589
- translocation of N-terminal part of prion protein, **299**, 85
- Plasma membrane transporter
- in major facilitator superfamily, conferring monocarboxylic acid/quindine resistance, *AQR1* gene for, **292**, 741
- Plasma proteins
- oxidized, identification in Alzheimer's disease, **293**, 1566
- Plasmid DNA
- complex with cationic liposomes, induction of cytokine secretion in macrophages in CpG motif-independent manner, **293**, 344
- instillation to liver surface, liver- and lobe-selective gene transfection after, **294**, 46
- uptake and degradation by murine dendritic cells, mechanism, **299**, 389
- Plasmids
- autonomously replicating sequence in yeast, silkworm rDNA nuclear matrix attachment region function as, **299**, 723
- recombinant, selection by Lac<sup>+</sup>/Lac<sup>−</sup> colony phenotype detection, limitations of, **298**, 37
- vector with SV40 enhancer elements, combined with electroporation, effect on gene expression in mouse muscle, **298**, 505
- Plasmin
- selectivity for, of Kunitz trypsin inhibitor with one disulfide bridge purified from *Swartzia pickellii*, **291**, 635



- Plasminogen  
activation, specificity role of streptokinase C-terminal domain in, **290**, 585  
generation of angiotatin-like molecules from, by snake venom metalloproteinases, **294**, 879
- Plasminogen activator inhibitor-1  
enhanced expression by dedifferentiated thyrocytes, **295**, 737  
gene expression in anchorage-dependent cells, regulation by cell adhesion, **291**, 185  
gene overexpression in rheumatoid synovial fibroblasts, **294**, 1121  
induction in smooth muscle cells, effect of TGF- $\beta$  receptor-binding peptides, **293**, 1279  
promotion of extracellular matrix deposition in airways of murine asthma model, **294**, 1155  
regulation by TGF- $\beta$ , restoration in Smad3-restituted human choriocarcinoma cells, **294**, 1079
- Plasmodium falciparum*  
PCNA homologue PfPCNA2, molecular characterization and expression, **298**, 371
- Plasmodium yoelii*  
hemozoin synthesis by, physicochemical mechanism, **290**, 595
- Plastid localization  
non-AUG mRNA translation initiation of phage-type plastid-targeted RNA polymerase in *Nicotiana glauca*, **299**, 57
- Platelet-activating factor  
activation of casein kinase 2 in *Herpetomonas muscarum muscarum*, **293**, 1358  
effects on apolipoprotein M expression in HepG2 cells, **292**, 944
- Platelet-derived endothelial cell growth factor  
potential in tumor therapy via inhibition by 2-deoxy-D-ribose, **291**, 806  
suppression of Fas-induced apoptotic signal transduction independent of enzymatic activity, **295**, 300
- Platelet-derived growth factor  
inhibition of induced MMP-9 expression in C6 glioma cells via PI 3-kinase-dependent pathway, **296**, 864  
role in MMP-3 expression, analysis in aortic endothelial cells expressing mutant PDGF receptors, **294**, 231  
Src family kinase-dependent phosphorylation of 29-kDa caveolin-associated protein in response to, **290**, 1447
- Platelet-derived growth factor-A  
expression in human vascular endothelial cells, inhibition by 15-deoxyprostaglandin J<sub>2</sub> independent of PPAR $\gamma$ , **298**, 128
- Platelet-derived growth factor-B  
expression in human vascular endothelial cells, inhibition by 15-deoxyprostaglandin J<sub>2</sub> independent of PPAR $\gamma$ , **298**, 128  
and PDGF-C and active  $\alpha$ -receptors, in medulloblastoma cells, **296**, 604
- Platelet-derived growth factor-BB  
effects on vascular smooth muscle cell expression of and adhesion to laminin-5, **294**, 1017  
modulation of *src*-suppressed C-kinase substrate gene expression, **297**, 1112  
stimulation of vascular smooth muscle cell proliferation and migration on laminin-5, mediation by ERK1/2, **293**, 1000
- Platelet-derived growth factor-C  
and PDGF-B and active  $\alpha$ -receptors, in medulloblastoma cells, **296**, 604
- Platelet-derived growth factor receptor  $\alpha$   
active, and PDGF-B and -C, in medulloblastoma cells, **296**, 604  
deficiency in glomerular mesangial cells of tenascin-C knockout mice, **290**, 1220  
gene overexpression in rheumatoid synovial fibroblasts, **294**, 1121
- Platelet-derived growth factor receptors  
mutant, aortic endothelial cells expressing, functional analysis with respect to MMP-3 expression, **294**, 231
- Platelet-endothelial cell adhesion molecule-1  
ITIM, tyrosine nitration of, abrogation of phosphorylation and SHP-2 binding, **296**, 1171
- Platelets  
aggregation, integrin-cytoskeleton linkage during, possible role of ILK-affixin complex, **297**, 1324  
anchoring onto fibrin clot, effect of vitronectin-fibrin interaction, **290**, 682  
function inhibition, YC-1-mediated vascular protection through, **291**, 1014  
p110 $\delta$  phosphoinositide 3-kinase detection (human), **296**, 178  
proteins from, levels of sialic acid residues in, analysis in diabetes, aging, and Hodgkin's lymphoma, **297**, 502  
resting, and thrombin-activated platelets, heat shock protein 90 complexes in, **297**, 129  
P-selectin expression and subsequent interactions with leukocytes, induction by thrombopoietin, **292**, 987; brief commentary, **299**, 343  
signaling induced by collagen, thromboxane A<sub>2</sub>, or ADP, role of LAT, **292**, 916
- Pleckstrin  
translocation, requirement of pleckstrin phosphorylation and newly formed ligands for, **293**, 640
- Pleckstrin homology domains  
interaction with Rkp1/Cpc2, modulation of Pck2-mediated signaling process in *Schizosaccharomyces pombe*, **289**, 987; erratum, **290**, 613
- Plectin  
direct binding to Fer kinase and negative regulation of catalytic activity, **296**, 904
- Pleiotrophin  
targeted overexpression, effects on postnatal bone development, **298**, 324
- Plexin-B1  
interaction with PDZ domain-containing Rho guanine nucleotide exchange factors, **297**, 32
- PLS1*  
*Magnaporthe grisea*, homologous genes in three fungi: fungal tetraspanin class, **297**, 1197
- PMAP-23  
and analogues, structural studies in DPC micelles, **290**, 204  
from porcine myeloid, fungicidal peptide analogs based on, design, **293**, 231
- PML oncogenic domains  
Daxx sequestration to, effects of sumoylation status, **295**, 495  
NBS1 recruitment into, via interaction with SP100 protein, **299**, 863
- PMP34  
identification as peroxisomal ATP transporter (human), **299**, 494
- PMP70  
conformation on hepatic peroxisomal membranes, nucleotide-induced changes, **291**, 1245
- Pmr1  
GFP-tagged, COS-1 cells with functional endoplasmic reticulum expressing, Ca<sup>2+</sup> signals in, **294**, 249
- PNUTS  
inhibition of retinoblastoma-directed PP1 activity, **297**, 463
- Podocytes  
glomerular, high-glucose-induced VEGF expression via PKC and ERK, **290**, 177
- Pof10  
isolation and characterization in fission yeast: F-box protein, **290**, 1399
- Polarization  
of constitutive exocytosis, by effectors of Rho-family GTPases: neuritogenesis, **294**, 923
- Pollard, Thomas D.  
interview, **297**, 6

- Pollen allergen  
rye grass, cellulose-binding domain of, homology modeling, **296**, 1346
- Polyamines  
infiltrated, effect on polygalacturonase activity and chilling injury responses in zucchini squash, **295**, 98
- Poly(A) polymerase  
PAPI and PAPII, detection in germinated wheat embryos and regulation by 65-kDa protein kinase, **293**, 403
- Polychlorinated biphenyls  
suppression of thyroid hormone-induced transactivation, **299**, 384
- Polycomb  
murine homolog M33 protein, nuclear translocation in regenerating liver, **291**, 508
- Polycomb*  
*Drosophila*, zebrafish *pcl* homolog of, encoding of nuclear protein capable of complex interactions, **294**, 456  
group, polyhomeotic homologs *ph2α* and *ph2β*, expression in distinct somite regions during zebrafish embryo segmentation, **291**, 245
- Polycystic ovary syndrome  
serum bisphenol A levels in, **291**, 76
- Polyenylphosphatidylcholine  
beneficial effects on ethanol-induced mitochondrial injury, role of dilinoleoylphosphatidylcholine (rat), **291**, 1109
- Polyethylene glycol  
effect on  $\alpha$ -chymotrypsin structure and activity, **293**, 416  
effect on fibrillar aggregates of  $\beta$ -amyloid peptide in vitro, **291**, 764
- Polyethylenimine  
suicide gene transfer mediated by, therapeutic effect on hepatocellular carcinoma in vivo, **291**, 48
- Polygalacturonase  
activity in zucchini squash after chilling, effect of infiltrated polyamines, **295**, 98
- Polyglutamine  
expanded, nuclear aggregates formed by expression of, ultrastructure, **294**, 429
- Polyglutamine diseases  
enhanced SUMOylation in, **293**, 307
- Polyglutamylolation  
role in STOP-neuronal tubulin interaction (mouse brain), **297**, 787
- Polyhemoglobin  
preparation based on dimethyl adipimidate and glutaraldehyde crosslinkage (bovine), **293**, 958
- polyhomeotic*  
homolog, alternative transcripts, expression in distinct regions of somites during segmentation of zebrafish embryos, **291**, 245
- Polyhydroxy compounds  
effects on  $\alpha$ -chymotrypsin structure and activity, **293**, 416
- Poly I:C  
natural killer cell cytotoxicity activated by, impairment in leptin receptor-deficient mice, **298**, 297
- Polyketides  
fungal, and yeast hydroxy fatty acids: Konrad Bloch special issue, **292**, 1213
- Poly(D,L-lactic acid)  
scaffolds, in vivo bone formation on, by immunoselected adenoviral genetically modified human osteoprogenitors, **299**, 208
- Poly(D,L-lactic-co-glycolic acid)  
biodegradable scaffolds, bone formation on, adenoviral BMP-2 gene transfer for, **292**, 144
- Poly-L-lysine  
complex with heparin, stimulation of angiogenesis in chick embryo chorioallantoic membrane, **290**, 820  
dissolution of fibrillar aggregates of  $\beta$ -amyloid peptide in vitro by, **291**, 764  
hyaluronate-grafted copolymer, NF- $\kappa$ B decoy with, inhibition of TNF- $\alpha$ -induced ICAM-1 expression in sinusoidal endothelial cells, **298**, 10
- Polymerase chain reaction  
allele-specific, primer mismatches in, kinetic characterization, **299**, 715  
multiplex standardized RT-PCR analysis of gene expression in small samples, **293**, 509  
PCR/SSCP analysis of complement C7 polymorphisms C7\*3 and C7\*4, **298**, 450  
quantitative, combination with method for simultaneous RNA and gDNA isolation from staphylococci, **291**, 528  
real-time, *see* Real-time polymerase chain reaction  
sequence-specific, estrogen receptor  $\alpha$  gene polymorphisms in endometrial cancer, **297**, 558
- Polymerization  
actin, Arp2/3 complex-mediated activities of WASP and WAVE1 C-terminal regions, and verprolin homology domains, **297**, 214  
actin filament branching during, caused by Arp2/3 complex and N-WASP, visualization and force measurement, **293**, 1550
- Polymorphisms  
Alu, in angiotensin-converting enzyme gene, protection against age-related macular degeneration, **295**, 668  
complement C7: molecular bases for C7\*3 and C7\*4, **298**, 450  
CYP1B1 gene, association with prostate cancer risk, **296**, 820  
CYP2A6\*7, \*8, and \*10 alleles, in vivo pilot study characterizing, **290**, 318  
CYP2C8 and CYP2C9, linkage between, **299**, 25  
estrogen receptor  $\alpha$  gene in endometrial cancer, **297**, 558  
genetic variants of receptors for thromboxane A2 and IL-4 in atopic dermatitis, **292**, 776  
lipid: Konrad Bloch special issue, **292**, 1201  
mitochondrial DNA, specific, in Klinefelter's syndrome, **297**, 341  
single nucleotide, of estrogen receptor  $\alpha$  in human renal cell carcinoma, **296**, 1200
- Polymorphonuclear leukocytes  
boswellic acid effects: p42<sup>MAPK</sup> and p38 MAPK activation and stimulation of Ca<sup>2+</sup> mobilization, **290**, 185
- Polypeptides  
cDNA-encoded, phage-displayed, immunoscreening for identification of B cell targets in autoimmune disease, **298**, 169  
death effector domain-only, of caspase-8 and caspase-10, inhibition of death receptor-induced cell death, **291**, 484
- Polyphosphoinositide kinases  
stimulation in *Trypanosoma cruzi* by synthetic peptide carrying residues 1–40 of chicken  $\alpha^D$ -globin, **293**, 314
- Poly-L-proline II helix  
role in bacterial cell selectivity in tritrypticin and analogs, **296**, 1044
- Polypyrimidine tract  
hepatitis C virus, internal initiation sites of de novo RNA synthesis in, **295**, 682
- Polystyrene  
silver-coated quartz crystal microbalance shielded with, covalent DNA immobilization using photobiotin-based UV irradiation, **290**, 962
- Polyubiquitination  
in monoubiquitinated proteins, ubiquitin surface necessary for, UIM\_Hrs binding to and occlusion of, **296**, 1222
- Polyunsaturated fatty acids  
effects on intracellular calcium in erythrocytes, **293**, 974  
inhibition of fatty acid synthase gene transcription, role of NF-Y, **290**, 1295  
modulation of proximal SREBP-1c promoter in rat hepatocytes, **290**, 256
- Ponasterone A  
chromafenozide antagonistic activity against, **292**, 1087
- Pore formation  
by Bax, **298**, 744  
and induction of nitric oxide synthase expression by *Vibrio vulnificus* cytolysin, **290**, 1090



- Pore-forming peptide  
cloninorin, hemolytic activity and developmental expression, **296**, 1238
- Pore-forming toxins  
peptides, identification of membrane interacting segments using viral fusion peptides, **293**, 1153
- Pore symmetry  
binding symmetry of extracellular divalent cations to tandem dimers of CNG channel, **298**, 478
- Porphyromonas gingivalis*  
growth, inhibition by trifluoromethionine, **292**, 964  
lipopolysaccharide, cellular responses associated with salivary mucin synthesis, **297**, 1149
- Posterior sex combs*  
*Drosophila*, zebrafish *pse1* homolog of, encoding of nuclear protein capable of complex interactions, **294**, 456
- Postsynaptic density  
EMAP enrichment in, **291**, 85  
identification of protein substrates of  $\text{Ca}^{2+}$ /calmodulin-dependent protein kinase II, **290**, 948
- Posttranscriptional signals  
cellular functions suggested by diverse eukaryotic transcripts of short tandem repeats, **298**, 581
- Posttranslational processing  
*Drosophila* nucleoside-diphosphate kinase, **295**, 689
- Potassium  
low levels of, vulnerability of primary cerebellar neurons to, increase by PQBP-1, **294**, 268
- Potassium channel interacting proteins  
KchIP2b, modulation of kinetic properties of Kv4.3, **295**, 223
- Potassium channels  
ATP-sensitive  
molecular basis in vascular smooth muscle (rat), **296**, 463  
nucleotide-binding folds of sulfonylurea receptor subunits, expression, purification, and interaction, **294**, 191  
 $\text{Ca}^{2+}$ -activated  
role in increase of  $\text{Ca}^{2+}$  levels in cultured chick myoblasts, **290**, 1176  
small-conductance, effects of reticulated chimeric peptide derived from maurotoxin and Tsk scorpion toxins, **291**, 640  
cAMP-activated, in gallbladder epithelial cells (guinea pig), **290**, 1564  
eukaryotic, prokaryotic homologue Kch of, functional properties, **297**, 10  
 $\text{I}_A$ , inactivation in skeletal muscle, modulation by ATP (frog), **291**, 1287  
inhibition, and role of mitochondrial electron transport in acute  $\text{O}_2$  sensing in model airway chemoreceptors, **291**, 332  
mRNAs with AU-rich elements, brain-specific expression, **291**, 1265  
pore-forming subunit, truncated splice variant of KCNQ1 encoding, cloning from heart (rat), **294**, 199  
TREK-1, voltage-dependent gating of, molecular basis, **292**, 339  
voltage-gated  
effects of reticulated chimeric peptide derived from maurotoxin and Tsk scorpion toxins, **291**, 640  
Kv1.3, role in actinomycin D-induced apoptosis, **295**, 526  
Kv4.3, kinetic properties, modulation by KchIP2b, **295**, 223
- Potassium chloride  
activation of mitogen-activated protein kinase in bairer artery (rabbit), **293**, 660
- PP2  
attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72
- pp29  
caveolin-associated, Src family kinase-dependent phosphorylation, **290**, 1447
- ppa* genes  
paralogous, encoding Family I pyrophosphatases, expression and inactivation in marine cyanobacteria, **295**, 890
- PPAR, *see* Peroxisome proliferator-activated receptor
- P proteins  
yeast ribosomal stalk, phosphorylation, inhibition by Cu,Zn-superoxide dismutase, **296**, 1310
- PQBP-1  
effects on vulnerability to low potassium stress and transcription in primary cerebellar neurons, **294**, 268
- PqqC/D  
conversion of biosynthetic intermediate to pyrroloquinoline quinone, **299**, 268
- Pra1p/Yip3p  
*Saccharomyces cerevisiae*, interaction with Yip1p and Rab, **290**, 676
- Prader-Willi syndrome  
region, imprinted gene *Peg12/Frat3* in mouse 7C region homologous to, paternal expression, **290**, 403
- Prazosin  
angiogenesis induced by, VEGF expression in skeletal muscle endothelial cells of NOS-knockout mice during, **297**, 1270
- Preadipocytes  
adipose conversion of 3T3-L1 cells, identification of membrane proteins selectively expressed during, **293**, 1161  
*hSR-BI*-promoter activity, induction by oxysterol-activated LXR $\alpha$ /RXR, **299**, 916  
serum-free differentiation, and transient expression of PPAR $\gamma$  (3T3-L1 cells), **296**, 125
- Preconditioning  
effects on ischemia–reperfusion-induced matrix metalloproteinase-2 release and activation, **296**, 937  
paracrine repercussions on angiogenesis and apoptosis of endothelial cells, **291**, 261
- Prefoldin  
*Pyrococcus*, molecular chaperone activity, **291**, 769
- Pregnane X receptor  
repression in liver during acute phase response, associated reduction of cytochrome P450 expression (mouse), **293**, 145  
splicing variants, identification in liver (human), **298**, 433
- Pregnenolone sulfate  
modulation of angiotensin II-induced protein kinase C activity in anterior pituitary of rat, gender differences, **294**, 95
- Prenylation  
proteins in osteoclasts, inhibition by bisphosphonate NE21650, **290**, 869
- Prenyl diphosphate synthase  
*Sulfolobus solfataricus* hexaprenyl diphosphate synthase, product specificity, and mimetic mutations, **297**, 1097
- trans*-Prenyltransferase  
peroxisomal activity (rat), **291**, 1128
- Preprotein translocase  
spontaneous insertion of chloroplast SecE into thylakoid membrane, **293**, 747
- Pre-recruitment  
as mechanism of transcriptional activation by SoxS in *Escherichia coli*, **291**, 979; *erratum*, **294**, 1191
- Presenilin-1  
 $\beta$ -catenin regulation mediated by, role of  $\gamma$ -secretase, **299**, 744  
complex with amyloid  $\beta$  precursor protein C-terminal fragments, amyloid  $\beta$  protein generation from, **292**, 571  
familial Alzheimer's disease-linked mutants, interference with translation regulation under ER stress, **296**, 313  
localization in rat mitochondria, **295**, 766
- Primer extension  
in isolation of single-stranded DNA, **290**, 1195
- Primer mismatches  
in allele-specific PCR, kinetic characterization, **299**, 715



- Prion protein  
cellular, ablation of expression of, effect on mitochondrial number and morphology, **291**, 372  
N-terminal part, cell membrane translocation, **299**, 85
- Prion protein-like  
cDNA sequence and tissue expression (*Fugu rubripes*), **294**, 912
- Prions  
human, bioassay with follicular dendritic cells from knock-in mouse, **294**, 280
- pRL-TK plasmid  
and pRG-B, in genetic reporter system, effects of Nurr1, **294**, 1036
- Pro-aminopeptidase processing protease  
role of N-terminal propeptide, **296**, 78
- Probucol  
effects on glycated albumin cytotoxicity to retinal pericytes (bovine), **292**, 1010
- Prochlorococcus*  
paralogous *ppa* genes encoding Family I pyrophosphatases, expression and inactivation, **295**, 890
- Procollagen C-proteinase enhancer protein  
type I, stabilization of RNA strands in protein synthesis in hepatic stellate cells, **290**, 898
- Procollagens  
enhanced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635
- Product specificity  
hexaprenyl diphosphate synthase of *Sulfolobus solfataricus*, change by introduction of mimetic mutations, **297**, 1097
- Progesterone  
modulation of angiotensin II-induced protein kinase C activity in anterior pituitary of rat, gender differences, **294**, 95  
secretion by corpus luteum, role of preovulatory rise of ovarian ornithine decarboxylase, **293**, 106
- Progesterone receptor  
endogenous, coactivation by TIF2 in COS-7 cells, **295**, 469
- Proinsulin C-peptide  
molecular effects, **295**, 1035
- Prokaryotes  
putative homeodomain proteins, identification based on pattern and sequence similarity, **299**, 229
- Prokineticins  
isolation and identification as ligands of orphan G-protein-coupled receptors, **293**, 396
- Proliferating cell nuclear antigen  
P1PCNA2 homologue, molecular characterization and expression (*Plasmodium falciparum*), **298**, 371
- Proline  
l-aminocyclohexane-l-carboxylic acid substitution for, endomorphin analogue with, structural similarity to Leu-enkephalin  $\beta$ -turn, **297**, 138  
at HIV-1 p24<sup>gag</sup> N-terminal, acid-labile formylation of, detection by proteomics using 2D gel and MALDI-TOF-MS, **293**, 1107  
role of *cis* prolines 112 and 126 in restrictocin functional activity, **295**, 812
- Proline 4-hydroxylase  
PH-4, overexpression of, modulation of activity of hypoxia-inducible transcription factors, **296**, 343
- Proline hydroxylation  
direct activation of HIF-1 $\alpha$ -prolyl hydroxylase by nitric oxide, **295**, 657
- Promoters  
methylation, role in MMP-9 gene expression regulation (mouse lymphoma cells), **297**, 765
- Pro-neurotensin  
sorting to regulated secretory pathway without assistance of proprotein convertases, **290**, 191
- Propeptide  
N-terminal, role in pro-aminopeptidase processing protease, **296**, 78
- Propionate groups  
esterification, promotion of  $\alpha/\beta$  hemoglobin chain homogeneity of CN–hemin binding, **293**, 1354
- Propionibacterium acnes*  
fulminant hepatitis induced by, associated gene expression profile in liver, analysis by cDNA microarray system, **298**, 675
- Propionic acid  
side chain hydrogen bonding, in malaria pigment  $\beta$ -hematin, **294**, 132
- Proprotein convertase  
PACE4A, autocatalytic activation coupled with secretion, role of C-terminal region, **290**, 878
- Pro-renin converting enzyme  
mk9, induction in liver by thyroid hormone (guinea pig), **293**, 412
- pro-R* stereospecificity  
thermostable aldehyde dehydrogenase from *Cytophaga* sp. KUC-1, circular dichroism study, **298**, 632
- Prosomatostatin  
brefeldin A-induced N-glycosylation in AtT20 cells, **296**, 618
- Prostacyclin synthase  
in family associated with hypertension, splicing mutation in gene, **297**, 1135
- Prostaglandin A<sub>1</sub>  
effect on Fc $\epsilon$ RI expression in human basophilic KU812 cells, **297**, 193
- Prostaglandin E<sub>2</sub>  
stimulation of prostatic intraepithelial neoplasia cell growth via activation of IL-6/gp130/STAT-3 signaling pathway, **290**, 249
- Prostaglandin E<sub>2</sub> receptor  
EP<sub>1</sub> subtype, coupling to TRP5 expressed in *Xenopus laevis* oocytes, **298**, 398  
EP<sub>3</sub> subtype, effect on adenylyl cyclase activity in EP2 receptor-expressing COS-7 cells, **290**, 162  
subtype expression in hair follicles (mouse), **290**, 696
- Prostaglandin-E synthase  
membrane-associated, mPGE synthase-2, identification and characterization, **291**, 884
- Prostaglandin F<sub>2 $\alpha$</sub>   
stimulation of  
hepatocyte growth, role of MAP kinases, **291**, 588  
tyrosine phosphorylation of phospholipase C- $\gamma$ 1, **297**, 1102
- Prostaglandin F receptor  
mice deficient in, parturition, apoptosis and related proteins during, **292**, 675
- Prostaglandins  
effects on intracellular calcium in erythrocytes, **293**, 974  
splicing mutation in prostacyclin synthase gene in family associated with hypertension, **297**, 1135
- Prostate  
aging, TGF- $\beta$  and TGF- $\beta$  receptors in, analysis (rat), **294**, 464  
cDNA derived from, mapping to human chromosome 19 and protein encoded by, **296**, 281  
cDNA specific to, molecular cloning, expression, and immunobiology of recombinant protein, **297**, 1075  
dorsal and ventral lobes, growth factor gene and protein expression, effects of aging (rat), **292**, 482  
protease inhibitor gene *huWAP2* highly expressed in, identification, **290**, 452
- Prostate antigens  
molecular cloning and expression of prostate-specific cDNA and immunobiology of recombinant protein, **297**, 1075
- Prostate cancer  
BRAF25 immunohistological detection in human prostate tumor and cancer specimens, **295**, 136  
choline kinase overexpression, **296**, 580  
hNPSA involved in, cDNA cloning, expression, and immunobiology, **297**, 1075  
osteoprotegerin secretion, stimulation by cytokines in vitro, **293**, 451

- risk, CYP1B1 gene polymorphisms associated with, **296**, 820  
 spontaneous, in pet dog, role of angiostatin, **292**, 886
- Prostate cancer cells  
 BRAF25 detection: alternatively spliced protein of BRCA2-associated factor 35, **295**, 129  
 ceramide accumulation, independence from camptothecin-induced apoptosis (LNCaP cells), **294**, 363  
 detection of prostate-derived cDNA mapping to chromosome 19, **296**, 281  
 highly invasive, motility, suppression by *Ganoderma lucidum* (PC-3 cells), **298**, 603  
 serological cloning of PARIS-1: identification as TBC domain-containing immunogenic tumor antigen, **290**, 830  
 tissue inhibitor of metalloproteinase-1 expression, enhancement by staurosporine (human), **295**, 489
- Prostate epithelial cells  
 MUC1 metabolic complex formation (HPrE cells), **293**, 1183
- Prostatic intraepithelial neoplasia  
 cell growth, stimulation by prostaglandin E<sub>2</sub> via activation of IL-6/gp130/STAT-3 signaling pathway, **290**, 249
- Protanopia  
 missense mutations of red/green opsin genes in, **294**, 205
- Protease, *see* Proteinase
- Protease inhibitor  
 gene *huWAP2* highly expressed in prostate, identification, **290**, 452
- Proteasome  
 26S  
   activities of, regulation by peptides mimicking cleavage products, **295**, 1090  
   ubiquitin-like protein-binding subunits, identification, **296**, 813  
 cyclin D1 degradation by, impairment in UVB-induced skin carcinogenesis (mouse), **298**, 377  
 pestivirus envelope glycoprotein degradation, **296**, 470  
 pre-, para-, and postproteasomal mechanisms in molecular regulation of muscle cachexia, review, **290**, 1  
 retinoblastoma-related p130 degradation during adipocyte differentiation, **290**, 1066  
 role in suppression of STAT1 activity in hepatocytes, **299**, 574  
 Rpn10 component of, cooperative role with ubiquitin-like proteins in ubiquitin-dependent proteolysis, **293**, 986  
 ubiquitin-dependent degradation of c-Raf-1, protection by cell adhesion, **294**, 976  
 ubiquitin-independent degradation of ornithine decarboxylase in *Saccharomyces cerevisiae*, **293**, 139  
 ubiquitin-proteasome pathway, inhibition, induction of differential heat shock protein response in cardiomyocytes, **291**, 542
- Proteasome inhibitors  
 activation of transcription factors C/EBP- $\beta$  and - $\delta$  in human intestinal epithelial cells, **290**, 469  
 regulation of tyrosine phosphorylation of IRS-1 and insulin signaling in adipocytes, **296**, 1257
- Protective antigen  
*Bacillus anthracis*, thermal inactivation, role of Gln277 and Phe554 residues, **296**, 1058  
 expression in transgenic plants: step toward edible vaccine against anthrax, **299**, 345  
 LF<sub>254</sub>-GAL4DBD in combination with, delivery of DNA into mammalian cells by, **297**, 1121
- Proteinaceous toxins  
 from nematocyst venom of Okinawan sea anemone, isolation and bioactivities, **294**, 760
- Protein aggregation  
 heat-induced, lens  $\alpha$ A-crystallin, associated decrease in subunit exchange, **293**, 7  
 indirect analysis with hydrophobic dye, **293**, 572  
 unfolding-induced, manipulation by phage display-selected aggregate-binding peptides, **291**, 903
- Proteinase  
 blocking, and ATP binding, role in stabilization of FtsH-unfolded protein complex, **296**, 8  
 expression in osteoclast cultures, regulation by osteoprotegerin, **293**, 38  
 HIV, drug-resistant, inhibition by HIV-1 Vif-derived peptide, **292**, 832  
 HIV-1, autolysis of, effects of remote mutation, X-ray and NMR studies, **294**, 395  
 tobacco etch virus, P1' specificity, **294**, 949
- Proteinase I  
*Xanthomonas campestris*, *prtI* gene encoding, transcription increase during stationary phase and role of Clp, **295**, 43; *erratum*, **296**, 1034
- Proteinase D-1  
 involved in keratin degradation, isolation (*Stenotrophomonas* sp.), **294**, 1138; *erratum*, **295**, 1034
- Protein degradation, *see also* Proteasome  
 FtsH-unfolded protein complex stabilization by binding of ATP and blocking of protease, **296**, 8  
 implication of F-box protein Pof10 from *Schizosaccharomyces pombe*, **290**, 1399  
 keratin, isolation of enzymes responsible and mechanism (*Stenotrophomonas* sp.), **294**, 1138; *erratum*, **295**, 1034
- Protein delivery  
 apparent cell membrane translocation caused by positively charged DNA-binding proteins, **291**, 367
- Protein disulfide-isomerase  
 ERp57, DNA-binding activity, association with *a'* domain, **295**, 67
- Protein domain  
 chicken  $\alpha$ <sub>1</sub>-acid glycoprotein, role in chiral recognition, **295**, 587
- Protein folding, *see also* Protein refolding; Protein unfolding  
 active human ferritin H/L-hybrid in *E. coli*, efficiency, sequence effect, **298**, 225  
 apoplastocyanin: designed variant showing reversible folding, **296**, 988  
 cysteine proteinase inhibitor (*Clitocybe nebularis*), **297**, 962  
 in *Escherichia coli* in vivo, effects of silent mutations, **293**, 537  
 horseradish peroxidase, enhancement by antiperoxidase antibodies, **291**, 959  
 human liver mitochondrial aldehyde dehydrogenase in *E. coli*, mediation by GroESL, **298**, 216  
 kinetics, of lysozyme, linear correlation with thermal stability, **291**, 795  
 pestivirus envelope glycoproteins, role of disulfide bond formation, **296**, 470  
 stability, of cyclic nucleotide phosphodiesterases from plant, yeast, and *E. coli*, **291**, 875  
 stabilization and transfer of protein-folding intermediates by *Pyrococcus* prefoldin to chaperonins for, **291**, 769
- Protein function  
 and base frequencies at second codon position of *Vibrio cholerae* genes, **290**, 81
- Protein kinase  
 65-kDa, from germinated wheat embryo, regulation of poly(A) polymerases PAPI and PAPII, **293**, 403  
 activity during germination of aerial spores of *Streptomyces graticolor*, **299**, 335  
 eukaryotic, acidophilic character of putative ancestor PID261/BUD32 in yeast, **296**, 1366  
 phosphorylation of yeast ribosomal stalk, inhibition by Cu,Zn-superoxide dismutase, **296**, 1310
- Protein kinase A  
 Ras/cAMP/PKA pathway, regulation of mitochondrial enzyme content of respiratory competent yeast, **293**, 1383  
 role in CREB DNA binding activation by 50-Hz magnetic field, **296**, 1013



- role in enhancement of adipocyte lipolysis in exercise-trained rats, **295**, 236
- signaling pathway, role in induction of cyclooxygenase-2 expression by fluid in MC3T3-E1 osteoblasts, **297**, 46
- Protein kinase B
- insulin-induced phosphorylation, decrease after chronic insulin treatment, prevention by rapamycin, **293**, 1021
- Protein kinase C
- activation
    - in adipocytes by pancreastatin (rat), **299**, 525
    - role in metabolic responses induced by thrombin in human umbilical vein endothelial cells, **293**, 979
    - role in upregulation of astroglial phospholipase D by phorbol esters, **297**, 545
  - activation of Ras/ERK pathway, FGF-2 and TPA induction of MMP-9 secretion in MCF-7 cells by, **293**, 1174
  - angiotensin II-induced activity in anterior pituitary, steroid modulation of, gender differences (rat), **294**, 95
  - atypical, lack of PAR3 $\beta$  binding to, **299**, 641
  - dominant negative mutant, analysis of P2X<sub>1</sub> receptor subunit contribution to gating with, **291**, 611
  - effect on
    - calmodulin and cyclin D binding by SSeCKS, **290**, 1368
    - endoplasmic reticulum cholesterol, **290**, 488
  - effect of hydrogen peroxide, **293**, 610
  - independence from thrombin-stimulated Pyk phosphorylation in human endothelium, **294**, 1001
  - induction of breast cancer motility by upregulation of u-plasminogen activator secretion, mechanism, **290**, 552
  - mediation of
    - ATP modulation of I<sub>A</sub> channel inactivation in skeletal muscle (frog), **291**, 1287
    - synthesis and secretion of osteoprotegerin in osteoblast-like cells, **290**, 42
  - phosphorylation of pleckstrin, requirement for pleckstrin translocation, **293**, 640
  - regulation of 5-HT uptake, modulation by interaction of serotonin transporter C-terminal region and MacMARCKS, **294**, 272
  - role in
    - CREB DNA binding activation by 50-Hz magnetic field, **296**, 1013
    - GnRH stimulation of annexin 5 mRNA expression in anterior pituitary cells, **291**, 915
    - leucine promotion of glucose uptake by skeletal muscle (rat), **299**, 693
    - MHC class II-mediated signal transduction in resting B cell line, **291**, 139
    - shedding of neurotensin receptor-3/sortilin luminal domain in HT29 cells, **298**, 760
    - VEGF expression under high glucose conditions in glomerular podocytes, **290**, 177
  - subtype- and species-specific knockdown using short interfering RNA, **298**, 738
- Protein kinase C $\alpha$
- dual regulation of phospholipase D1 in vivo, **294**, 1109
  - gene silencing in mammalian cells by preformed small RNA duplexes, **295**, 744
- Protein kinase C $\beta$
- isoforms, activation, role in 4-hydroxynonenal-induced MCP-1 release by macrophages, **294**, 547
- Protein kinase C $\gamma$
- interaction with GAP-43, modulation by palmitoylcarnitine, **294**, 823
- Protein kinase C $\delta$
- nPKC $\delta$ , differential localization during cell cycle progression, **294**, 127
- Protein kinase C  $\epsilon$
- calpastatin regulation of transformed state in NIH3T3 fibroblasts via, **290**, 510
- Protein kinase C $\zeta$
- enhancement of insulin-like growth factor 1-dependent mitogenic activity in rat clonal  $\beta$  cell line RIN 1046-38, **290**, 85
- Protein kinase C $\theta$
- protein kinase D identification as downstream target of, **291**, 444
- Protein kinase CK1
- phosphorylation of recombinant spermidine/spermine N<sup>1</sup>-acetyltransferase, effect on binding to mitochondria, **290**, 463
- Protein kinase CKII
- activation by platelet-activating factor in *Herpetomonas muscarum muscarum*, **293**, 1358
  - activity, role in Mayaro virus infection cycle, **296**, 1334
  - $\alpha$  and  $\beta$  subunits, complexes with Hsp90 in resting and thrombin-activated platelets, **297**, 129
  - cyclin H as binding partner for, **296**, 13
  - interaction with ribosomal protein L22 (*Drosophila melanogaster*), **298**, 60
  - phosphorylation of recombinant spermidine/spermine N<sup>1</sup>-acetyltransferase, effect on binding to mitochondria, **290**, 463
  - potent phosphorylation of Epstein-Barr virus latent membrane protein 1, **294**, 586
  - stimulation of rat liver mitochondrial glycerophosphate acyltransferase activity, **296**, 1091
- Protein kinase D
- identification as downstream target of protein kinase C $\theta$ , **291**, 444
- Protein O-linked mannose  $\beta$ 1,2-N-acetylglucosaminyltransferase
- proteins modified by, detection in muscle-eye-brain disease, **291**, 1283; *erratum*, **293**, 1579
- Protein oxidation
- metal-catalyzed, of extracellular matrix proteins, promotion of human mesangial cell apoptosis, **292**, 652
- Protein phosphatase 1
- myosin-binding subunit, phosphorylation by p21-activated kinase (rat), **297**, 773
  - retinoblastoma-directed activity, inhibition by PNUTS, **297**, 463
  - role in Bcl-2 dephosphorylation after prolonged mitotic arrest induced by paclitaxel, **294**, 504
- Protein phosphatase 1 $\alpha$
- possible role in  $\gamma$ -H2AX dephosphorylation, **297**, 1318
- Protein phosphatase 2A
- dephosphorylation of Tctex2-related dynein light chain (rainbow trout), **297**, 800
  - regulation by H<sub>2</sub>O<sub>2</sub> and glutathionylation, **293**, 610
- Protein phosphatase inhibitor-1 gene
- alternative splice products encoded by, identification (human), **291**, 1293
- Protein-protein interaction
- CD4 binding to HIV-1 Nef, role of helix in CD4 cytoplasmic domain, **292**, 734
- Protein refolding
- purification strategy for NS3 protease of Langkat virus using, **294**, 16
  - role of N-terminal propeptide of pro-aminopeptidase processing protease, **296**, 78
- Proteins
- 33-kDa, derived from spinach photosystem II, tyrosine-dominated fluorescence emission, **293**, 593
  - $\beta$  sheets, design, **296**, 988
  - constitutive, sorting to regulated secretory pathway by inserted dibasic residues, **290**, 191
  - cytosolic, interacting with hepatic CYP2B1/B2 gene 5'-proximal region, phenobarbitone-mediated translocation into nucleus (rat), **292**, 312
  - expression during germination of aerial spores of *Streptomyces granaticolor*, **299**, 335
  - function and activity in vitro, analysis with cell-based scintillation proximity assay using membrane-soluble scintillants, **296**, 857



- (<sup>15</sup>N, <sup>13</sup>C)-labeled, resonance assignments using protocol based on HN(C)N experiment, **293**, 427
- nuclear, capable of complex interactions, encoding by *pcl* and *psc1*, **294**, 456
- nuclear import, age-associated reduction in fibroblasts (human), **294**, 354
- platelet, levels of sialic acid residues in, analysis in diabetes, aging, and Hodgkin's lymphoma, **297**, 502
- profiling and biomarker identification, SELDI-TOF MS, **292**, 587
- recombinant, real-time, molecular aptamer beacons for, **292**, 31
- sarcomeric, gene mutations in dilated cardiomyopathy, **298**, 116
- secondary structural prediction accuracy, limits: secondary structural wobble, **294**, 621
- soluble, monocyte-derived, conferral of Ca<sup>2+</sup> dependence on 5-lipoxygenase, **295**, 985
- testis nuclear extract, photoaffinity labeling (bovine), **297**, 714
- Protein secretion**
- directing of constitutive protein to regulated secretory pathway by insertion of dibasic residues, **290**, 191
- Protein sequencing**
- identification of protein substrates of Ca<sup>2+</sup>/calmodulin-dependent protein kinase II in postsynaptic density, **290**, 948
- Protein serine/threonine phosphatases**
- with EF-hand domains, interaction with calmodulin, **293**, 1047
- Protein synthesis**
- amino acid activation for, Konrad Bloch special issue, **292**, 1231
- in hepatic stellate cells, RNA strands in, stabilization by type I procollagen C-proteinase enhancer protein, **290**, 898
- signaling cascade in adipocytes, activation by pancreastatin (rat), **299**, 525
- Protein-tyrosine kinase**
- associated activity of Src, downregulation by SH3 domain of Src in absence of SH2 domain-pY527 interaction, **296**, 664
- direct action on  $\alpha_1$  subunit in modulation of Ca<sub>v</sub>2.2 calcium channels, **290**, 1246
- estrogen-induced pituitary tumors, effect of angiotensin II and IV (rat), **297**, 931
- inhibition by *N*-coumaroyltyramine: arrest of human transformed cells, **292**, 1104
- insulin-independent pathway, shikonin stimulation of glucose uptake in 3T3-L1 adipocytes via, **292**, 642
- and phosphatases, dynamic regulation of signal transduction through T cell receptor, **296**, 637
- SH2 domain-containing, recruitment by tyrosine-phosphorylated ITIMS and ITAMS of SPAP2a, **293**, 1037
- signaling cascade, inhibitors of, attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72
- Protein-tyrosine kinase inhibitors**
- EGF receptor-specific, inhibition of TGF- $\alpha$ -driven tumor growth, **290**, 349
- eliminating membrane depolarization caused by Alzheimer A $\beta$ (1–42, aggr.) peptide, **293**, 1204
- Protein-tyrosine phosphatase**
- and kinases, dynamic regulation of signal transduction through T cell receptor, **296**, 637
- low-molecular-weight dual-specificity, identification and characterization, **298**, 545
- PTP-FERM localization in nerve processes through FERM domain, **292**, 13
- SH2 domain-containing, recruitment by tyrosine-phosphorylated ITIMS and ITAMS of SPAP2a, **293**, 1037
- targeting to lipid rafts and interaction with caveolin-1, **296**, 692
- TC-PTP, nuclear isoform, regulation of interleukin-6-mediated signaling pathway via STAT3 dephosphorylation, **297**, 811
- Protein-tyrosine phosphatase  $\sigma$**
- overexpression, and impaired glucose-induced insulin secretion in hereditary diabetic Goto-Kakizaki rats, **291**, 945
- Protein-tyrosine/serine phosphatase**
- Tk*-PTP, enzymatic characteristics and substrate protein identification (*Thermococcus kodakaraensis* KOD1), **295**, 508
- Protein unfolding**
- aggregation induced by, manipulation by phage display-selected aggregate-binding peptides, **291**, 903
- Rubisco: association of heat-induced conformational change with activity loss, **290**, 1128
- stabilization of molten globule state of papain by urea, **290**, 1441
- $\alpha$ -Proteobacteria**
- 23S rRNA, 5'-end processing, role of RNase E, **299**, 780
- Proteoglycans**
- bone, and components, inhibition of hydroxyapatite crystal growth, **292**, 727
- from wild-type *Caenorhabditis elegans*, isolation and characterization, **293**, 1374
- Proteolipidic vectors**
- for gene transfer to lung, **290**, 1489
- Proteolysis**
- cyclin D1, impairment in UVB-induced skin carcinogenesis (mouse), **298**, 377
- genotoxin release from cooked beef by, **293**, 1497
- growth hormone receptor, region critical for, identification (human), **290**, 851
- MEPE, inhibition by *Phex*, **297**, 38
- Notch and  $\beta$ APP in human cells, mutually exclusive  $\gamma$ -secretase-like events, **290**, 1408
- proteasomal, ubiquitinated muscle proteins, mechanisms and regulatory steps influencing, review, **290**, 1
- secreted form of human ADAM9 with  $\alpha$ -secretase activity for amyloid precursor protein, **293**, 800
- site-specific, detection in secretory pathways, **296**, 419
- ubiquitin-dependent, cooperative roles of ubiquitin-like proteins and Rpn10, **293**, 986
- Proteome analysis**
- hepatocellular carcinoma, **291**, 1031
- Proteomics**
- detection of acid-labile formylation of HIV-1 p24<sup>gag</sup> N-terminal proline, **293**, 1107
- protocatechuate 3,4-dioxygenase detection and characterization in *Acinetobacter lwoffii* K24 using column separation, **295**, 903
- SELDI-TOF MS approach: protein profiling and biomarker identification, **292**, 587
- tools for quantitative phosphoproteome analysis, review, **290**, 885
- Protocatechuate 3,4-dioxygenase**
- in *Acinetobacter lwoffii* K24, detection and characterization by proteomics using column separation, **295**, 903
- Protochlorophyllide**
- levels in chloroplast envelope membranes (pea), **299**, 751
- Protochlorophyllide oxidoreductase C**
- catalytic function (*Arabidopsis thaliana*), **291**, 921
- Proton-translocating inorganic pyrophosphatase**
- genes, wide occurrence in parasitic and free-living protozoa, **294**, 567
- Protoporphyrin IX**
- detection in chloroplast envelope membranes (pea), **299**, 751
- photosensitizing effect in pigmented melanoma (mouse), **297**, 468
- Protozoa**
- parasitic and free-living, wide occurrence of proton-translocating pyrophosphatase genes, **294**, 567
- prt1*
- encoding *Xanthomonas campestris* protease 1, transcription increase during stationary phase and role of Clp, **295**, 43; *erratum*, **296**, 1034
- psc1*
- encoding of nuclear protein capable of complex interactions (zebrafish), **294**, 456

- PSD95-associated protein  
identification as CaM kinase II substrate in postsynaptic density, **290**, 948
- PSD-Zip45  
clustering of chimeric ET<sub>B</sub>R/mGluR by, **295**, 756
- Pseudogenes  
in murine Phf5a multigene family containing PHD-finger-like motif, **293**, 816
- Pseudohypoparathyroidism type 1a  
TSH resistance in, role of paternal imprinting of G $\alpha_s$  in human thyroid, **296**, 67
- Pseudoislets  
differential expression of insulin genes 1 and 2, **296**, 589
- Pseudomonas aeruginosa*  
cd<sub>1</sub> nitrite reductase, binding of cyanide: role of active site His369 in ligand stabilization, **291**, 1  
MexB transmembrane domain mutation, transport defect caused by, restoration by secondary site mutation, **292**, 513  
tripartite efflux systems, substrate specificity of, determination by RND component, **299**, 247
- Pseudomonas* sp.  
from chemostat, pentachlorophenol-degrading monooxygenase gene, cloning and characterization, **290**, 770
- Pseudomonas syringae*  
Chinese cabbage genes induced by, isolation by subtractive hybridization using selective adaptor ligation, **299**, 352
- Pseudomonas* TOL plasmid  
promoter regulatory region, integration host factor-induced DNA bending structure in, AFM, **291**, 361
- Pseudorabies virus  
DNA-binding protein, functional interaction with PRV DNase, **293**, 1301
- Psoriasis  
lesion, increased expression of SDR family member *hRDH-E2*, **297**, 1171
- Psychological stress  
effects on bilirubin metabolites in urine (human), **293**, 517
- PTB domain  
tensin homologue C1-TEN with, interaction with Ax1 receptor tyrosine kinase, **299**, 793
- PTEN gene  
promoter analysis, **292**, 422
- Pterin-6-carboxylic acid  
production by pterin photooxidation in vitiligo, **292**, 805
- PTHrP, *see* Parathyroid hormone-related protein
- PTK2  
deletion in *Saccharomyces cerevisiae* *trk1 $\delta$ trk2 $\delta$*  mutant cells, dual effect on ion homeostasis, **295**, 1142
- PTP-FERM  
localization in nerve processes through FERM domain, **292**, 13
- PTS1 protein  
catalase-deficient temperature-sensitive import by *pex2* CHO cell mutant, **293**, 1523
- PTS2 protein  
catalase-deficient temperature-sensitive import by *pex2* CHO cell mutant, **293**, 1523
- R-(+)-Pulegone  
hepatotoxicity mediated by, relevance of stereoselective hydroxylation of 4-methyl-2-cyclohexenone, **297**, 202
- Pullulan  
repeating unit, oligosaccharides structurally related to, enzymatic synthesis and characterization, **297**, 382
- Pulmonary fibrosis  
bleomycin-induced, Smad3 expression in, regulation by negative feedback loop of TGF- $\beta$  signaling, **294**, 319
- Pulse generator  
for gene electrotransfer into skeletal muscle, physiological applicability, **296**, 443
- Purinergic receptors  
P2X, zebrafish orthologs of mammalian P2X<sub>4</sub> and P2X<sub>5</sub> subunits, cloning and characterization, **295**, 849  
P2X<sub>1</sub>, subunit contribution to gating, analysis with dominant negative PKC mutant, **291**, 611
- Purple acid phosphatase  
mammalian, phosphatase and oxygen radical-generating activities, **292**, 128
- PV.1  
antimorphic, formation of secondary axis by induction of ectopic organizer, **292**, 1081
- PXR  
repression in liver during acute phase response, associated reduction of cytochrome P450 expression (mouse), **293**, 145  
splicing variants, identification in liver (human), **298**, 433
- pY527  
SH2 domain interaction with, downregulation of kinase activity of Src by SH3 domain in absence of, **296**, 664
- Pyk2  
endothelial, expression in two isoforms and association with paxillin and p130 Cas (human), **290**, 1470  
thrombin-stimulated phosphorylation in endothelium, role of intracellular Ca<sup>2+</sup>, PKC, and Src kinases, **294**, 1001
- 1-Pyrenebutanol  
in analysis of allosteric mechanisms of P450eryF, **294**, 806
- Pyrococcus horikoshii*  
deblocking aminopeptidase from, active site, **290**, 994  
OT3 strain, prefoldin, molecular chaperone activity, **291**, 769
- L-trans-Pyrrolidine-2,4-dicarboxylic acid  
enhancement of hippocampal neuronal activity by stimulation of glial glutamate release, **295**, 376
- Pyrrolidine dithiocarbamate  
induction of cyclooxygenase-2 expression in NIH 3T3 fibroblasts, **298**, 230
- Pyrroloquinoline quinone  
PqqC/D conversion of biosynthetic intermediate to, **299**, 268
- Pyruvate  
and protective effect of L-alanine against D-galactosamine-induced hepatocellular injury, **291**, 738
- Pyruvate carboxylase  
molecular cloning and domain structure (chicken), **295**, 387
- Pyruvate deficiency  
cell death in proliferative cultured calvarial osteoblasts by, **294**, 1177
- Pyruvate dehydrogenase  
activation, role in glucose-stimulated insulin secretion, **291**, 1081
- Pyruvate dehydrogenase kinase  
adenovirus-mediated overexpression, and glucose-induced insulin secretion in pancreatic islets, **291**, 1081
- Pyruvate dehydrogenase phosphate phosphatase  
adenovirus-mediated overexpression, and glucose-induced insulin secretion in pancreatic islets, **291**, 1081
- Q
- Quartz crystal microbalance  
sensitivity enhancement of DNA sensors by nanogold surface modification, **295**, 14  
silver-coated, polymer-shielded, covalent DNA immobilization using photobiotin-based UV irradiation, **290**, 962
- Quercetin  
interaction with human serum albumin, fluorescence spectroscopy, **299**, 400  
modulation of HIF-1 $\alpha$  activity in endothelial cells, **293**, 446
- Quercetin glucuronide  
prevention of angiotensin II-induced VSMC hypertrophy via inhibition of JNK and AP-1 signaling pathways, **293**, 1458



- Quinidine  
and monocarboxylic acids, resistance, yeast plasma membrane transporter gene *AQR1* conferring, **292**, 741
- Quorum sensing  
bacterial, role of RpoS, **293**, 456
- R
- Rab  
ADP-ribosylation by exoenzyme S, **291**, 91  
interaction with *Saccharomyces cerevisiae* Pra1p/Yip3p, **290**, 676  
subcellular localization in bone-resorbing osteoclasts: analysis of intracellular membrane trafficking pathways, **293**, 1060
- Rab5  
endocytically active, regulation of *Trypanosoma cruzi* invasion of nonphagocytic cells, **291**, 516
- Rab7  
endocytically active, regulation of *Trypanosoma cruzi* invasion of nonphagocytic cells, **291**, 516  
gene encoding, upregulation in liver and artery by cholesterol-rich diet, **293**, 375
- Rab11  
GTP-dependent interaction with Rab11-FIP4, and condensation of Rab11 positive compartment in HeLa cells by Rab11-FIP4 overexpression, **299**, 770
- Rab11-FIP4  
GTP-dependent interaction with Rab11, and overexpression causing condensation of Rab11 positive compartment in HeLa cells, **299**, 770
- Rab11-FIP/Rip/RCP protein family  
homo- and hetero-interacting abilities, **292**, 909
- Rab27A  
GTP-bound, interaction with synaptotagmin-like protein 5 with C-terminal tandem C2 domains, **293**, 899
- Rab coupling protein  
Rab11-FIP/Rip/RCP protein family, homo- and hetero-interacting abilities, **292**, 909
- Rac  
interaction with IRSp53, regulation by WAVE2, **293**, 93  
lamellipodia formation dependent on, requirement of intact vinculin protein for, **290**, 749  
and p38 MAP kinase, role in activation of NADPH oxidase in neutrophils (bovine), **293**, 1571  
Rac-ERK-dependent pathway, role in eotaxin induction of RBL-2H3 mast cell migration, **298**, 392  
regulation of embryonic cell adhesion (*Xenopus laevis*), **298**, 364
- Rac1  
ADP-ribosylation by exoenzyme S, **291**, 91
- Rac2  
T cell receptor-induced transcription activation, mediation by DOCK2, **296**, 716
- RACK1  
homologue Rkp1/Cpc2, interaction with pleckstrin homology domain, modulation of Pck2-mediated signaling in *Schizosaccharomyces pombe*, **289**, 987; *erratum*, **290**, 613
- Rad23  
26S proteasome subunits binding to, identification, **296**, 813  
cooperative role with Rpn10 in ubiquitin-dependent proteolysis, **293**, 986
- Rad51 focus  
phosphorylation by Arg tyrosine kinase, role in homologous recombinatorial DNA repair, **299**, 697
- RAD52  
human, association with transcription factors, **297**, 1191
- Radiation sensitivity  
salivary gland cancer cells, enhancement by cytoplasmic TSC-22, **292**, 957
- RAE-1  
isoforms, high levels on mouse tumor cell lines assessed by anti-“pan” RAE-1 antibody and effect on NK susceptibility, **290**, 140
- Raf/ERK pathway  
inhibition during muscle differentiation, role in cell cycle arrest induction by p38 MAPK activation, **298**, 765
- Rafts  
association, apical secretion of serpins from MDCK cells independently of, **299**, 35
- Ral  
ADP-ribosylation by exoenzyme S, **291**, 91
- Ralstonia* sp. SJ98  
chemotaxis toward co-metabolizable nitroaromatic compounds, **299**, 404
- RAMP1  
myocardial expression, increase in chronic heart failure (rat), **294**, 340
- RAMP3  
myocardial expression, increase in chronic heart failure (rat), **294**, 340
- Ran-binding protein  
association with homeodomain interacting protein kinase 2, **297**, 148
- RANKL  
gene expression, epigenetic control (mouse), **293**, 126  
gene promoter, vitamin D-responsive element in, role in augmentation of osteoclastogenesis by vitamin D<sub>3</sub>, **290**, 650  
production by osteoblasts, stimulation by histamine, **298**, 240
- Rapl  
type I interferon-dependent gene transcription and activation, role of CrkL adapter protein, **291**, 744
- Rap1B  
overexpression during pancreas regeneration (rat), **299**, 806
- Rapamycin  
partial prevention of insulin resistance induced by chronic insulin treatment, **293**, 1021
- Rapid scanning spectrophotometry  
analysis of catalysis with hexa-coordinate ferric lignin peroxidase as starting material, **297**, 406
- RAS  
pathways downstream of, role in TEL-induced aggregation and tube formation in NIH3T3-UCLA cells, **291**, 820
- Ras  
activation by tissue inhibitors of metalloproteinase-1 and -2 through different pathways, **296**, 201  
ADP-ribosylation by exoenzyme S, **291**, 91  
MAPK activation dependent on, reciprocal actions of NCAM and tPA in rat hippocampal neurons via, **298**, 262
- Ras-associated protein 1B  
overexpression during pancreas regeneration (rat), **299**, 806
- Ras/cAMP/PKA pathway  
regulation of mitochondrial enzyme content of respiratory competent yeast, **293**, 1383
- Ras/ERK pathway  
protein kinase C activation of, FGF-2 and TPA induction of MMP-9 secretion in MCF-7 cells by, **293**, 1174  
role in TGF- $\beta$ 1 modulation of MMP-9 production in transformed keratinocytes, **296**, 267
- Ras-like protein  
GTP-binding protein, Rin, activation by growth factor stimulation, **295**, 651
- RBP-Jk  
expression level, and transcriptional activity of truncated Notch receptors for *HES1* and *HES5* promoters, **291**, 775
- RCAS1  
association with ductal breast cancer progression, **293**, 1544



## RDX

biotransformation, catalysis by diaphorase via N-denitration mechanism, **296**, 779

## RE1-silencing transcription factor

REST4, mediation of modulation of REST/NRSF-silencing function during BDNF gene promoter activation, **290**, 415

## Reactive nitrogen species

donors, specificity of antioxidant enzyme inhibition in skeletal muscle by, **294**, 1093

## Reactive oxygen intermediates

signaling, role in UVB-enhanced IL-18 production in human keratinocytes, **298**, 289

## Reactive oxygen species

AMPA-induced production in hippocampal neurons, reduction by (–)-epigallocatechin gallate, **290**, 1506

cell injury in vascular smooth muscle cells by, protective effect of chemically induced cellular antioxidants, **292**, 50; *erratum*, **294**, 1192

DNA damage mediated by, inhibition by aspirin, **293**, 705

generation, inhibition, role in suppression of Bax-induced apoptosis in yeast by soybean ascorbate peroxidase, **290**, 457

loss of oxidized and chlorinated bases in DNA treated with, implications for assessment of oxidative damage in vivo, **296**, 883

mitochondria-derived, role in oxygen sensing, **297**, 346

psychological stress-associated, effects on bilirubin metabolites in urine (human), **293**, 517

role in apoptosis enhancement by As<sub>2</sub>O<sub>3</sub> buthionine sulfoximine combination in hepatocellular carcinoma cell lines, **291**, 861

role in IL-1 $\beta$  induction of MMP-9 in murine RAW 264.7 macrophages, **298**, 251

scavenging by antioxidant cocktail EM-X, **296**, 1148

scavenging or quenching properties of curcumin, **295**, 62

## Real-time polymerase chain reaction

analysis of gene expression in osteoarthritic vs normal cartilage: enhanced YKL-39 expression (human), **299**, 109

kinetics, quantitative method for, validation, **294**, 347

quantitation of hepatitis B virus closed circular DNA, **295**, 1102

SYBR Green-based, monitoring of TGF- $\beta$  isoform mRNA expression during hepatic stellate cell transdifferentiation, **295**, 330; *erratum*, **296**, 1035

## RecA

promotion of base pair sliding within DNA repeats, quantitative analysis with slippage assay, **296**, 983

Receptor activator of nuclear factor- $\kappa$ B ligand, *see* RANKL

## Receptor expression

circadian regulatory pathway-associated, in immortalized supra-chiasmatic nucleus cells, **292**, 20

## Receptor tyrosine kinase

EphA2, negative regulation by Cbl, **296**, 214

epidermal growth factor receptor, solubilized, activation mechanism, **290**, 914

RET, isoforms, differential interaction of Enigma protein with, **296**, 515

## Recombination

## homologous

in Chinese hamster cells, effects of cyclin E overexpression, **296**, 363

gene targeting by, **297**, 1

intrasegmental, in evolution of New World arenaviruses, **296**, 1118

## RecQ helicases

role in RNAi in mammals, **291**, 1119

## RECQL helicase

splicing variant, molecular cloning (human), **298**, 789

## Redifferentiation

after dedifferentiation, in tissue engineering, growth factors for, **294**, 149

## Redox events

role in caspase activation in zinc-depleted airway epithelial cells (A549 and NCI-H292 cells), **297**, 1062

## Redox regulation

interleukin-10, review, **297**, 163

proinflammatory cytokines and I $\kappa$ B- $\alpha$ /NF- $\kappa$ B nuclear translocation and activation, **296**, 847

## Reductase

cytochrome *b*<sub>558</sub> ferric/cupric reductase from rabbit duodenal brush border membranes, characterization, **291**, 220

## Reductive tricarboxylic acid cycle

five-subunit-type 2-oxoglutarate:ferredoxin oxidoreductase from *Hydrogenobacter thermophilus* TK-6, **292**, 280

## Ref-1

oxidoreductive modification of two cysteine residues in paired domain of Pax-8, regulation of DNA-binding activity, **297**, 288

## Regeneration therapy

pancreatic beta cells: towards a cure for diabetes, **296**, 1039

## Regulated secretory pathway

sorting of constitutive protein to, by insertion of dibasic residues, **290**, 191

## Rejoining fidelity

DNA double-strand breaks by ataxia-telangiectasia nuclear extract, **297**, 275

## Relative telomeric repeat content

analysis of telomere length variation using, **291**, 210

## Relaxin

*Drosophila* insulin/relaxin-like peptide gene, cloning, characterization, and embryonic expression, **295**, 312

RELM- $\alpha$ 

gene expression in white adipose tissue of lactating mice, **296**, 458

## Renal cell carcinoma

estrogen receptor  $\alpha$  in, single nucleotide polymorphisms (human), **296**, 1200

## Renal epithelial cells

hypotonicity-induced ENaC translocation in, calmodulin-dependent regulation (A6 cells), **298**, 619

Na<sup>+</sup>,K<sup>+</sup>-ATPase translocation in, induction by Rho small GTPase, **297**, 1231

## Renaturation

DNA, kinetics, revised theory and experimental verification, **293**, 870

## Renin-angiotensin system

activation and suppression in human dendritic cells, **296**, 194

## Reovirus

mammalian, mRNA capping enzyme, mutational analysis, **291**, 932

## Replication

## HIV-1

implications of human topoisomerase I binding to and dissociation from hairpin-loop RNAs, **297**, 593

in latently infected cells, inhibitory effects of IFN- $\gamma$ , **291**, 890

RNA, role of domains I and II in 5' nontranslated region of HCV genome, **290**, 105

## Replication-deficient virus

herpes simplex virus, vector, suicide gene therapy of hepatoma and peritonitis carcinomatosis by, **291**, 855

## Replication origin

chromosomal, in yeast, silkworm rDNA nuclear matrix attachment region function as, **299**, 723

single, of archaeon *Methanosarcina mazei*, revealed by Z curve method, **297**, 396

## Replicative life span

macaque cells, role of somatic mutations in *p53*, **295**, 644

## Replicative senescence

high glucose-induced, **296**, 93

- Replicon**  
subgenomic, derived from hepatitis C virus-infected cell line, generation, **293**, 993
- Representational difference analysis**  
gene expression in osteoarthritic vs normal cartilage: enhanced YKL-39 expression (human), **299**, 109
- Representational difference analysis of cDNA**  
cardiac ankyrin repeat protein expression in human heart failure, **293**, 1377
- Reproductive tract**  
male, erythropoietin production (mouse), **296**, 145
- Resiniferatoxin**  
binding to vanilloid receptor-1, and VR1-mediated  $\text{Ca}^{2+}$  influx, effects of thapsigargin, **293**, 777
- Resistin**  
expression in adipose tissue in *db/db* mice, effect of metformin, **298**, 345  
gene expression in white adipose tissue of lactating mice, **296**, 458  
regulation by C/EBPs, PPARs, and signal-transducing molecules, **299**, 291  
secretion in 3T3-L1 adipocytes, inhibition by endothelin-1, **296**, 383
- Resonance energy transfer**  
in labeled bovine serum albumin, effects of metallic silver particles, **294**, 886
- Respiration**  
mitochondrial, and NO synthesis, effects on intracellular oxygen tension, **290**, 97  
yeast competent for, mitochondrial enzyme content, effects of Ras cascade activation, **293**, 1383
- Respiratory rate**  
in discs excised from zucchini and subjected to chilling injury, effects of peptic oligomers, **290**, 577
- Response regulators**  
*Arabidopsis* ARR4/ATRR1/IBC7 and ARR8/ATRR3, overexpression, cytokinin response effects, **293**, 806
- REST/NRSF-silencing function**  
during BDNF gene promoter activation, REST4-mediated modulation, **290**, 415
- Restricted feeding**  
entrainment of peripheral clocks to, role of functional CLOCK, **298**, 198
- Restriction enzymes**  
*EcoRI*, sequence recognition by, role of phosphate contacts, **295**, 198
- Restrictocin**  
functional activity, role of *cis* prolines 112 and 126, **295**, 812
- Resveratrol**  
activation of membrane-bound guanylyl cyclase in coronary arterial smooth muscle, **291**, 1218  
effect on  $\text{G}_0$ – $\text{G}_1$  transition and cell cycle progression of mitogenically stimulated human lymphocytes, **297**, 1311  
effect on growth of 4T1 breast cancer cells in vitro and in vivo, **291**, 1001
- RET**  
activation  
extra- and intracellular cysteine targets for, **292**, 826  
regulation of interleukin-8 production by multiple signaling pathways, **294**, 642  
isoforms, differential interaction of Enigma protein with, **296**, 515
- Ret**  
monoclonal antibodies to, generation and characterization, **294**, 813
- Reticulon**  
*Caenorhabditis elegans*, interaction with RME-1 during embryogenesis, **293**, 698
- Retina**  
amacrine cells, expression of mRNA of vertebrate ancient opsin isoform Pal-VAM (smelt), **290**, 280  
calcium-binding proteins in, characterization, **290**, 615  
degeneration, *C6orf37* candidate gene for, identification and characterization on chromosome 6q14, **293**, 356  
dorsal/ventral patterning, role of TBX3 (*Xenopus laevis*), **290**, 737  
embryonic, preferential expression of homeodomain-interacting protein kinase 2 gene (mouse), **290**, 942  
expression of prion protein-like (*Fugu rubripes*), **294**, 912
- Retinal endothelial cells**  
vascular endothelial growth factor and VEGF receptor levels, **293**, 710
- Retinal neurons**  
differentiation of embryonic stem cells into, **297**, 177
- Retinal pericytes**  
advanced glycation end product-induced injury, protective effect of pigment epithelium-derived factor, **296**, 877  
apoptosis and expression of VEGF in, effect of advanced glycation end products (bovine), **290**, 973  
glucose toxicity in vitro, potentiation by sorbitol dehydrogenase overexpression, **299**, 183  
glycated albumin cytotoxicity to, effects of antioxidants (bovine), **292**, 1010
- Retinal pigment epithelial cells**  
expression of scavenger receptors BI and BII (human), **292**, 1017
- Retinoblastoma protein**, *see also* p107; p130  
induction  
by oxidized low-density lipoprotein, **293**, 1327  
by sodium arsenite in cervical carcinoma cells (human), **293**, 298  
pRb/E2F pathway in HL-60 cells, effects of 4-hydroxynonenal, **295**, 267  
protein phosphatase type 1 activity toward, inhibition by PNUTS, **297**, 463  
Rb/p16<sup>INK4A</sup> pathway, inactivation, requirement for immortalization of human mesenchymal stem cells, **295**, 354  
repression of *Rig-1* promoter, reversal by RB interaction with Pax-2, **296**, 1019
- 9-cis-Retinoic acid**  
dominant expression of ABCA1 on basolateral surface of Caco-2 cells stimulated by, **296**, 625  
effect on macrophage cholesterol efflux to free apolipoprotein A-I in C3H and C57BL/6 mice, **290**, 1376  
induction of aquaporin-1 gene in erythroleukemia HEL cells, **293**, 913
- all-trans-Retinoic acid**  
differentiation of acute promyelocytic leukemia NB4 cells and HL-60 cells induced by, gene expression during, **296**, 1125  
haptoglobin gene expression activated by, role of CCAAT/enhancer-binding protein  $\alpha$ , **294**, 956  
induction of aquaporin-1 gene in erythroleukemia HEL cells, **293**, 913
- Retinoic acid-inducible gene 1**  
induction in endothelial cells by lipopolysaccharide and regulation of COX-2 expression, **292**, 274
- Retinoic acid response element**  
identification in aquaporin-1 promoter, **293**, 913
- Retinoid X receptor**  
ligands, dominant expression of ABCA1 on basolateral surface of Caco-2 cells stimulated by, **296**, 625  
oxysterol-activated LXR $\alpha$ /RXR, induction of *hSR-BI*-promoter activity in hepatoma cells and preadipocytes, **299**, 916  
PPARs/RXR $\alpha$  transcriptional activity, fibrate and statins as inducers of, **290**, 131
- Retinol binding protein**  
human plasma and urinary, comparative phenotypic analysis using mass spectrometric immunoassay, **297**, 401



- Retrograde tracing  
leptin receptors, neuropeptide Y, and tyrosine hydroxylase in autonomic neurons supplying fat depots (pig), **293**, 1138
- Retroviral vectors  
NIH3T3-UCLA cells infected with, TEL-induced aggregation and tube formation, **291**, 820  
spliced transcripts lacking Ψ-region, specific packaging, **293**, 239
- REV3  
role in mammalian cell survival, **293**, 1132
- Rev-5901  
induction of apoptosis in breast cancer cells, mechanism, **296**, 942
- Reverse gyrase  
*Sulfolobus tokodaii*, 3D electron microscopy, **297**, 749
- Reverse transcription polymerase chain reaction  
multiplex standardized, analysis of gene expression in small samples, **293**, 509  
pregnane X receptor splicing variant identification in liver (human), **298**, 433  
real-time, assay of matrix protein gene expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- RFP  
O-glycosylation, role in interaction with Enhancer of Polycomb 1, **290**, 409
- RGD peptides  
and cell surface receptors, micromechanical coupling between, **296**, 771
- rgpr85  
encoding G protein-coupled receptor, cloning and localization (rat), **298**, 613
- Rheumatoid arthritis  
AHNAK immunoreactivity, **291**, 951
- Rheumatoid synovial fibroblasts  
overexpression of genes causing tumor-like growth of rheumatoid synovium, **294**, 1121
- Rheumatoid synovium  
microcirculation, parathyroid hormone-related protein and cognate receptor expression (human), **297**, 890  
tumor-like growth, genes causing, overexpression in rheumatoid synovial fibroblasts, **294**, 1121
- Rhizobium leguminosarum*  
23S rRNA, 5'-end processing, role of RNase E, **299**, 780
- RhoA  
dominant negative, adeno-associated virus-mediated gene transfer, enhancement of erectile function in rat, **298**, 427
- Rhodanese  
oxidatively inactivated, reactivation by transient interaction with GroEL, **294**, 893
- Rhodobacter capsulatus*  
23S rRNA, 5'-end processing, role of RNase E, **299**, 780
- Rhodobacter sphaeroides*  
diazaborine-resistant mutant, enoyl-acyl carrier protein reductase in, characterization, **299**, 621
- Rhodopsin  
retinitis pigmentosa-associated mutations, biochemical phenotypes, **297**, 847
- Rhodovulum sulfidophilum*  
thiol-sulfate oxidation, role of SoxV, and SoxV reduction of periplasmic thioredoxin SoxW, **296**, 737
- Rho GDP-dissociation inhibitor  
role in cytokinesis of *Dictyostelium*, **296**, 305
- Rho GTPases  
and effectors, role in neuritogenesis, **294**, 923  
human *DBL* (*MCF-2*) proto-oncogene for, GEF activity of alternative splicing variants of, **299**, 455  
induction of Na<sup>+</sup>, K<sup>+</sup>-ATPase in renal epithelial cells, **297**, 1231
- Rho guanine nucleotide exchange factors  
PDZ domain-containing, interaction with plexin-B1, **297**, 32
- Rho-kinase  
inhibition, induction of αβ-crystallin expression in lens epithelial cells, **294**, 981
- Ribonuclease  
activity of human pancreatic ribonuclease on double-stranded RNA, role of glycine 38 (human), **297**, 390  
potent, from fruiting bodies of mushroom *Pleurotus pulmonarius*, **293**, 857
- Ribonuclease E  
role in 5'-end 23S rRNA processing in α-proteobacteria, **299**, 780
- Ribosomal DNA  
silkworm, nuclear matrix attachment region function as autonomously replicating sequence in plasmid and chromosomal replication origin in yeast, **299**, 723  
*Xenopus laevis*, transcription during oogenesis, **290**, 1151
- Ribosomal peptide  
from rainbow trout skin, antimicrobial activity, **296**, 167
- Ribosomal protein large P2  
gene expression in pancreatic cancer cells, differential display study, **293**, 391
- Ribosomal proteins  
age-dependent gene expression, analysis by oligonucleotide microarray data mining, **298**, 772  
L1, antimicrobial peptide HP (2–20) from N-terminus, antifungal mechanism against *Candida albicans*, **291**, 1006  
L22, interaction with casein kinase II (*Drosophila melanogaster*), **298**, 60  
L41, gene structure (carp), **295**, 582  
molecular interactions with PDCD4 in senescent diploid fibroblasts (human), **293**, 617
- Ribosomal RNA  
5S  
association of *Trypanosoma brucei* RNA-binding proteins p34 and p37 with, **290**, 569  
sequence complementarity to snoRNAs h5sn1, h5sn2, h5sn3, and h5sn4 (human), **299**, 196  
12S, deafness-associated A1555G mutation in, pathogenesis, **293**, 521  
23S, 5'-end processing in α-proteobacteria, role of RNase E, **299**, 780  
26S, in *Caenorhabditis elegans*, location of 2'-O-methyl nucleotides in, **297**, 1344  
40S precursor, production by rDNA transcription during oogenesis (*Xenopus laevis*), **290**, 1151  
identification in complex of RNA with *Clostridium botulinum* type E toxin, **291**, 154  
production in endothelial cells, relationship to nuclear function of angiogenin, **294**, 287
- Ribosomal stalk  
yeast, phosphorylation, inhibition by Cu,Zn-superoxide dismutase, **296**, 1310
- Ribosome-inactivating protein  
gelonin, uptake and intracellular fate in rat liver, **296**, 1180
- Ribosome modulation factor  
role in viability of *Escherichia coli* cells, **299**, 252
- Ribosome receptor  
binding of mammalian homolog of *Drosophila* Disks Large suppressor protein to, **294**, 1151
- Ribosomes  
30S and 70S, translation initiation complexes on leaderless mRNA, inhibition by kasugamycin, **297**, 1021  
associated cold shock response protein YfiA of *Escherichia coli*, solution structure, **299**, 710
- Ribotoxins  
restrictocin, functional activity, role of *cis* prolines 112 and 126, **295**, 812
- Ribozymes  
*Tetrahymena* group I, self-splicing activity, relationship to stability of master domain, **291**, 1225



- Ribulose-bisphosphate carboxylase, *see* Rubisco
- Rifampicin  
effect on UDP-glucuronosyltransferase activity toward bilirubin in primary rat hepatocyte culture, **291**, 29
- Rig-I* gene  
promoter, repression by retinoblastoma protein, reversal by RB interaction with Pax-2, **296**, 1019
- Rin  
activation by growth factor stimulation: Ras-like small GTP-binding protein, **295**, 651
- RING finger domain  
engineered double, ubiquitin ligase with, targeted substrate degradation by, **295**, 370
- RING finger protein  
conserved putative, cloning of human gene *RNF38* encoding, **294**, 1169  
large B-box, RFP, role of O-glycosylation in interaction with Enhancer of Polycomb 1, **290**, 409  
NIRF, involved in cell cycle regulation, **296**, 530
- RING-H2 domain  
conserved putative protein with, cloning of human gene *RNF38* encoding, **294**, 1169  
double, in *RNF32* expressed during sperm formation (human), **292**, 58
- Rip11  
Rab11-FIP/Rip/RCP protein family, homo- and hetero-interacting abilities, **292**, 909
- Rkpl/Cpc2  
interaction with pleckstrin homology domain, modulation of Pck2-mediated signaling process in *Schizosaccharomyces pombe*, **289**, 987; *erratum*, **290**, 613
- RME-1  
*Caenorhabditis elegans* reticulon interaction during embryogenesis, **293**, 698
- RNA  
alternative pre-mRNA splicing, modulation by pinin in vivo, **294**, 448  
binding to fragile X mental retardation proteins, species and isoform specificity (human, mouse), **292**, 1063  
complex with *Clostridium botulinum* type E toxin, structure and identity of RNA species in, **291**, 154  
de novo synthesis, internal initiation sites in hepatitis C virus polypyrimidine tract, **295**, 682  
double-stranded  
ribonucleolytic activity of human pancreatic ribonuclease on, role of glycine 38 (human), **297**, 390  
signaling mediated by, block by monoclonal antibody against Toll-like receptor 3, **293**, 1364  
hairpin loop, human topoisomerase I binding to and dissociation from, implications for HIV-1 replication, **297**, 593  
HIV-1, cleavage of, reconstitution, **293**, 1084  
replication, role of domains I and II in 5' nontranslated region of HCV genome, **290**, 105  
short interfering, *see* Short interfering RNAs  
small genomic segment, phylogeny of New World arenaviruses based on, **296**, 1118  
strands, stabilization in protein synthesis by type I procollagen C-proteinase enhancer protein in hepatic stellate cells, **290**, 898  
unspliced, expression in Moloney murine leukemia virus, *cis*-elements involved in, **290**, 1139
- RNA aptamers  
2'F-RNA aptamer binding HIV-1 SU glycoprotein, structural characterization, **293**, 924  
activity against myasthenic autoantibodies, improvement by extended sequence selection, **290**, 656  
to Alzheimer's disease amyloid peptide, selection, **290**, 1583  
to HIV-1 nucleocapsid protein, selection and stabilization, **291**, 925  
to NFATc DNA binding domain, in vitro selection, **298**, 486
- RNA-binding domain  
Smaug, crystallization and characterization, **297**, 1085
- RNA-binding motif  
RRM-type, detection in Drb1, **297**, 96  
specifying RNA-protein interactions, Smaug RNA-binding domain as, **297**, 1085
- RNA-binding motif protein 8  
*RBM8* gene for, conserved physical linkage with *GnRH-R* in medaka and human genomes, **293**, 327
- RNA-binding proteins  
Mel-N1, Mel-N2, and Mel-N3, expression in adipose cells, **294**, 329  
Musashi1 gene encoding, expression in human hepatoma cell lines, **293**, 150  
Orb, physical interactions with Dmnc (*Drosophila melanogaster*), **290**, 225  
p34 and p37, from *Trypanosoma brucei*, association with 5S rRNA, **290**, 569  
potential, type I procollagen C-proteinase enhancer protein: RNA stabilization in hepatic stellate cell protein synthesis, **290**, 898
- RNA capping  
mutational analysis of mammalian reovirus mRNA capping enzyme, **291**, 932
- RNA-dependent ATPase/helicase  
component eukaryotic initiation factor 4AII, association with hepatitis C virus NS5B protein in vitro, **292**, 659
- RNA-dependent RNA polymerase  
hepatitis C virus, C-terminally truncated, kinetic analysis, **290**, 1188; *erratum*, **296**, 227
- RNA duplexes  
preformed small, gene silencing in mammalian cells by, **295**, 744
- RNA interference  
functional screening method using, isolation of molecules interacting with GEX-3, **292**, 697  
gene silencing in mammalian cells by preformed small RNA duplexes, **295**, 744  
inactivation of *Oct-3/4* and *c-mos* genes in mouse preimplantation embryos and oocytes using short interfering RNAs, **296**, 1372  
in mammals, role of RecQ helicases, **291**, 1119
- RNA polymerase  
C-terminally truncated RNA-dependent, of HCV, kinetic analysis, **290**, 1188; *erratum*, **296**, 227  
Eo<sup>S</sup> form, specific recognition of *aidB* promoter, mechanism, **292**, 922  
NS5B, de novo RNA synthesis by, internal initiation sites in HCV polypyrimidine tract, **295**, 682  
phage-type, plastid-targeted, non-AUG mRNA translation initiation (*Nicotiana glauca*), **299**, 57  
 $\sigma^{38}$  subunit, role in viability of *Escherichia coli* cells, **299**, 252  
vesicular stomatitis virus, recombinant, capping activity of, **293**, 264
- RNA polymerase I  
activity during oogenesis (*Xenopus laevis*), **290**, 1151
- RNA polymerase II  
association of human RAD52 protein with, **297**, 1191  
large subunit, cleavage by caspases during DNA damage-induced apoptosis, **296**, 954
- RNA world  
and evolution, Konrad Bloch special issue, **292**, 1267
- RND component  
determination of substrate specificity of *Pseudomonas aeruginosa* tripartite efflux systems, **299**, 247
- RNF32  
double RING-H2 domain-containing, expressed during sperm formation (human), **292**, 58
- RNF38*  
encoding conserved putative RING finger protein, cloning and characterization (human), **294**, 1169

# rng mutations

extensive overproduction of AdhE protein by, *rng*-interacting genetic factors causing, **295**, 92

# rnpB promoter

stringent response of, alteration by mutations in –35 region (*Escherichia coli*), **290**, 1183; *erratum*, **291**, 431

# RNPS1

role in pinin modulation of alternative pre-mRNA splicing in vivo, **294**, 448

# Ro52 autoantigen

ubiquitination, **295**, 774

# Rod domain

and micro-dystrophin cDNA effects on dystrophic phenotypes in transgenic *mdx* mice, **293**, 1265

# Rolling

rGPIb $\alpha$ -conjugated phospholipid vesicles on vWF surface under flow conditions, vesicle flexibility and, **296**, 765

# Roscovitine

cyclin-dependent kinase 5 complexed with, molecular model, **297**, 1154

# Rosiglitazone

effects on monocyte differentiation and potential as antiatherosclerotic agent, **290**, 707

# Rous sarcoma virus

v-src oncogene-containing, fibroblasts transformed by, increased activity of c-Src and Csk in, **290**, 790

# RPLP2

gene expression in pancreatic cancer cells, differential display study, **293**, 391

# Rpn10

and ubiquitin-like proteins, cooperative roles in ubiquitin-dependent proteolysis, **293**, 986

# rpoS gene

from *Vibrio harveyi*, cloning, sequencing, and functional studies, **293**, 456

# RRM-type RNA binding domains

detection in Drb1, **297**, 96

# RtcB

identification as substrate of Tk-PTP protein tyrosine/serine phosphatase from *Thermococcus kodakaraensis* KOD1, **295**, 508

# RTEF-1

effect on activity of mouse mammary tumor virus LTR, **296**, 1279

# Rubisco

CbbQ encoded by gene downstream of, ATP binding and hydrolysis and autophosphorylation, **290**, 1434

oxygenase activity, potential of sugars to curtail, **298**, 247

thermal conformational change associated with activity loss, **290**, 1128

# RuBisCO activase

Ca<sup>2+</sup>-dependent protein kinase components downstream of, role in gibberellin signaling, **290**, 690

# Rundown

role of single amino acid mutation in rapid inactivation of epithelial Ca<sup>2+</sup> channels, **291**, 278

# Runt-related transcription factor-2/core binding factor $\alpha$ 1

mRNA, augmentation by FGF-2 in mouse marrow stromal cells, **290**, 526

# Ruthenium

nitric oxide scavengers based on, mechanistic studies, **292**, 519

# Ryanodine receptors

[Ca<sup>2+</sup>]<sub>i</sub> elevation dependent on, by ligand-dependent activation of melanocortin 5 receptor, **290**, 844

cardiac, critical regulatory domain, peptide probe study, **291**, 1102

functional, isolation, **294**, 402

gene expression, effects of doxorubicin and C-13 deoxydoxorubicin, **291**, 433

RyR1, stimulation by ADP-ribose in rat skeletal muscle, **296**, 1267

RyR2, binding to FKBP12.6, effects of ARVD2 and VTSIP mutations, **299**, 594

# S

# S1P<sub>4</sub>/Edg-6 receptor

phytosphingosine 1-phosphate affinity for, **297**, 600

# S6 kinase

hypophosphorylation during ethionine-mediated ATP depletion, **298**, 235

# p70 ribosomal

activity in adipocytes, effects of pancreastatin (rat), **299**, 525

signaling pathway, molecular crosstalk with MAPK cell signaling pathway, **293**, 463

# S100A3

from hair cuticles, characterization (human), **299**, 857

# S100A5

restricted expression in kidney (human), **291**, 623

# S100 proteins

interaction with olopatadine, amlexanox, and cromolyn, **292**, 1023

# *Saccharomyces cerevisiae*

AQR1-encoded plasma membrane transporter conferring monocarboxylic acid/quinidine resistance, **292**, 741

aspartic proteinase active site, Tyr75 orientation in, **295**, 1020

ATP synthase fusion protein with DsRed, reduction of oligomerization of, **298**, 707

Bax-induced apoptosis, suppression by soybean ascorbate peroxidase by inhibition of ROS generation, **290**, 457

Cdc5, phosphorylation of Net1 and assistance in Cdc14 release from nucleolus, **294**, 687

colonies, ammonia pulses in, control by amino acids, **294**, 962

cyclic nucleotide phosphodiesterase, biochemical characterization, **291**, 875

Gef1 protein, association with chloride channel activity, **294**, 1144

genome sequence, and greed, editorial, **297**, 161

ion homeostasis in *trk1 $\delta$ trk2 $\delta$*  mutant cells, dual effect of SKY1 and PTK2 deletions, **295**, 1142

OLE1 gene transcription, induction by low temperature and oxygen, Mga2p identification as sensor of, **291**, 707

ornithine decarboxylase degradation, role of ubiquitin, **293**, 139

oxysterol-binding protein homolog OSH3, two-hybrid cloning and characterization, **293**, 733

pancreatic transcription factor PDX-1 functional expression and analysis in, **295**, 724

6-phosphofructo-1-kinase structure and activity, effects of C-terminal modification, **295**, 992

PID261/BUD32, acidophilic character, **296**, 1366

Pra1p/Yip3p, interaction with Yip1p and Rab, **290**, 676

resistance to chlorinated phenoxyacetic acid herbicides, role of Pdr1p-mediated transactivation of *TPO1* and *PDR5* genes, **292**, 530

respiratory competent, mitochondrial enzyme content, effects of Ras cascade activation, **293**, 1383

ribosomal stalk phosphorylation, inhibition by Cu,Zn-superoxide dismutase, **296**, 1310

site-specific proteolysis, detection in secretory pathways, **296**, 419

Src, kinase activity of, downregulation by SH3 domain in absence of SH2 domain-pY527 interaction, **296**, 664

telomerase-lacking cells, global stress response induction in, **291**, 714

vacuolar ATPase subunit E expression, purification, and characterization, **298**, 383

# Saccharose

effects on  $\alpha$ -chymotrypsin structure and activity, **293**, 416

# Salicylic acid

and aspirin,  $\zeta$ -crystallin selectivity for, **293**, 440



- Salinity  
upregulation of mRNA encoding glycine-rich RNA-binding protein of *Sorghum bicolor*, **296**, 1063
- Salivary gland cancer cells  
radiation sensitivity, enhancement by cytoplasmic TSC-22, **292**, 957
- Salivary glands  
atrophic change during adenovirus-induced hyperleptinemia (rat), **291**, 675  
mucin synthesis, associated cellular responses, effect of *Porphyromonas gingivalis* lipopolysaccharide, **297**, 1149
- SALL1  
interaction with UBE2I and SUMO-1, **296**, 870
- Salt  
dietary, differential regulation of aquaporin-2 transcript in Sprague–Dawley and Dahl SS/Jr rats, **296**, 755
- Salt bridge network  
formation in primary hemoglobin component of tufted duck, role of  $\alpha 99$ Arg, **291**, 176
- Salt resistance  
 $\alpha$ -helical antimicrobial peptide P18, and synergistic effect with vancomycin, **290**, 558
- Salt stress  
curtailing of oxygenase activity of Rubisco by sugars and sugar alcohols in response to, **298**, 247  
and hyperosmotic stress, regulation of expression of different sets of genes in *Synechocystis* sp. PCC 6803, **290**, 339
- SAMP10  
nitric-oxide synthase increase in brain of, promotion of Bcl-2-linked apoptosis, **297**, 517
- Sap2  
*Candida albicans*, inhibition by peptidomimetic series active on HIV-1 protease, **297**, 1350
- SAP97  
identification as CaM kinase II substrate in postsynaptic density, **290**, 948
- SAPK, *see* c-Jun N-terminal kinase
- SAP protein  
proliferation-associated cytokine-inducible protein CIP29, cloning and characterization, **292**, 593
- Sarcolemma  
cardiac,  $\text{Na}^+$ ,  $\text{K}^+$ -ATPase function, depression by lack of nitric oxide synthase, **294**, 1030
- Sarcomere  
titin of, mutations, role in dilated cardiomyopathy, **291**, 385
- Sarcomeric proteins  
gene mutations in dilated cardiomyopathy, **298**, 116
- Sarcoplasmic reticulum  
cardiac  
 $\text{Ca}^{2+}$ -ATPase function, depression by lack of nitric oxide synthase, **294**, 1030  
 $\text{Ca}^{2+}$ -calmodulin protein kinase activity, inhibition by  $\text{Ca}^{2+}$  overload, **293**, 727  
ryanodine receptor gene expression, effects of doxorubicin and C-13 deoxydoxorubicin, **291**, 433
- Sarcoplasmic reticulum ATPase inhibitor  
thapsigargin, binding to and inhibition of cloned vanilloid receptor-1, **293**, 777
- Satellite cells  
activation/proliferation during muscle regeneration, possible role of non-muscle-derived HGF, **292**, 709
- Saxatilin  
disulfide bonds in, structural and functional significance, **293**, 530
- Scaffolding  
activity of SSeCKS, reduction by phosphorylation by mitogenically activated kinases, **290**, 1368
- Scaffolding domain  
caveolin-3, conformation of synthetic peptides, and deletion of tripeptide sequence of muscular dystrophy, **298**, 203
- Scaffolds  
biodegradable polymer, bone formation on, adenoviral BMP-2 gene transfer for, **292**, 144  
review of bone tissue engineering, **292**, 1
- SCAN box  
SCAN/(Cys)2(His)2 zinc finger transcription factor *ZNF323* in early human embryonic development, **296**, 206
- Scanning immunoelectron microscopy  
analysis of epitopes on endometrial epithelium, **292**, 102
- Scatter factor, *see* Hepatocyte growth factor
- Scavenger receptor  
macrophage-specific MARCO, bacteria-binding activity, role of arginine residues in domain V, **290**, 1462
- Scavenger receptor class B type I  
expression in retinal pigment epithelial cells (human), **292**, 1017  
gene expression in hepatocytes and/or macrophages, effect of testosterone, **296**, 1051  
*hSR-BI*-promoter activity in hepatoma cells and preadipocytes, induction by oxysterol-activated LXR $\alpha$ /RXR, **299**, 916  
regulatory role in intestinal cholesterol uptake, **292**, 390
- Scavenger receptor class B type II  
expression in retinal pigment epithelial cells (human), **292**, 1017
- scFv  
functional improvement with phage coat protein III fusion system, **298**, 566
- Schizosaccharomyces pombe*  
cell cycle progression, role of Cu,Zn-SOD, **297**, 854  
functional checkpoint response, restoration by human CDC25B and -C after gene replacement, **295**, 673  
heterochromatin silencing, role of Hrp3, **295**, 970  
isolation and characterization of F-box protein Pof10 in, **290**, 1399  
longitudinal growth, induction by  $\beta$ -tubulin-like cDNA expressed specifically in elongating cotton fibers, **296**, 1245  
Pck2-mediated signaling process, modulation by pleckstrin homology domain interaction with Rkp1/Cpc2, **289**, 987; *erratum*, **290**, 613  
plant pre-mRNA splicing in, **293**, 1209  
*uvi15<sup>+</sup>* pre-mRNA, fibrillarin binding to 3' *cis*-regulatory element in, **294**, 1184
- Schwannomin  
intra- and intermolecular interactions, effects of *Nf2* missense mutations, **290**, 366
- SCID mouse  
liver, transplantation of human cord blood somatic stem cells into,  $\beta_2$ -microglobulin downregulation after, **294**, 1052
- Scintillation proximity assay  
cell-based, using membrane-soluble scintillants, for study of protein function and activity in vitro, **296**, 857
- SCN1A  
mutations, correlation with severe myoclonic epilepsy in infancy, **295**, 17
- Scorpion toxins  
kurtotoxin-like I and II, targeting of voltage-gated  $\text{Ca}^{2+}$  and  $\text{Na}^+$  channels, **299**, 562  
maurotoxin and Tsk, reticulated chimeric peptide derived from, synthesis, 3D structure, and pharmacology, **291**, 640
- Scorpion venom  
linear peptides from, purification, structure–function analysis, and molecular characterization, **293**, 1514
- Sea anemone venom  
in nematocyst, proteinaceous toxins from, isolation and bioactivities, **294**, 760
- SEA module domain  
in membrane-tethered mucin MUC17, **291**, 466



- Seasonal acclimatization  
regulation of expression of ribosomal protein L41 in carp, **295**, 582
- Seawater  
prolonged incubation in, induction of DNA-dependent kinase  
activity in *Arbacia punctulata* eggs, **294**, 667
- Sec12p  
genes regulating, identification, **296**, 560
- sec24-20 mutant  
defective in COPII vesicle formation from ER, genetic screen for  
high-copy suppressors of, **296**, 568
- SecE  
chloroplast, spontaneous insertion into thylakoid membrane, **293**,  
747
- Secondary axis  
formation by antimorphic PV.1 via induction of ectopic organizer,  
**292**, 1081
- Secondary structural wobble  
limits of protein prediction accuracy, **294**, 621
- Secondary structure  
Klenow  $\text{exo}^-$  traversal of G–G:C triplex, mechanism: Klenow  $\text{exo}^+$   
block at G–G hairpin, **295**, 730
- $\alpha$ -Secretase  
activity for amyloid precursor protein, cloning of secreted form of  
human ADAM9 with, **293**, 800  
and  $\beta$ -secretase, changes in Alzheimer's disease, **299**, 373
- $\beta$ -Secretase  
activation by nicastrin after BACE1 binding to nicastrin, **293**, 1228  
BACE1, splice variants in brain and pancreas (human), **293**, 30  
and  $\alpha$ -secretase, changes in Alzheimer's disease, **299**, 373  
zymogen, prediction of tertiary structure, **292**, 702
- $\gamma$ -Secretase  
cleavage of Notch 1, role of mutations at P1' position, **299**, 569  
complexes, component BACE1 of, interaction with nicastrin, **293**,  
1228  
related cleavages, mutually exclusive, of Notch and  $\beta$ APP in human  
cells, **290**, 1408  
role in presenilin-mediated regulation of  $\beta$ -catenin, **299**, 744
- $^{125}\text{I}$ -Secretin receptor  
binding sites in rat brain, in vitro autoradiographic localization, **292**,  
133
- Secretory pathways  
site-specific proteolysis in, detection, **296**, 419
- Seeds  
antifungal protein and chitinase, isolation and macrophage-stimu-  
lating activity (pinto bean), **290**, 813  
galactose-binding lectin, subunit sequences and interactions with  
human O-glycosylated glycoproteins (champedak), **295**, 1007  
primed, temporal generation of multiple antifungal proteins in, **292**,  
236
- Seed-specific gene  
*AmA1* from plant, pre-mRNA splicing in *Schizosaccharomyces*  
*pombe*, **293**, 1209
- Segmentation  
zebrafish embryos, expression of *polyhomeotic* homologs *ph2 $\alpha$*  and  
*ph2 $\beta$*  in distinct regions of somites during, **291**, 245
- Seizures  
limbic, triggering by abnormal expression of neuronal nitric oxide  
synthase (rat), **291**, 255
- SELDI-TOF mass spectrometry  
protein profiling and biomarker identification, **292**, 587
- E-Selectin  
modulation of malignant properties of T84 colon carcinoma cells,  
**293**, 1099  
NF- $\kappa$ B-mediated induction by TNF- $\alpha$  in endothelial cells, regulation  
by atrial natriuretic peptide, **295**, 1068  
and sialyl Lewis $\text{x}$ , inhibition of adhesion between, suppression of  
metastasis by macrophelide B via, **291**, 1065
- L-Selectin  
activation of NFAT induced by, mechanisms, **291**, 237
- P-Selectin  
expression on platelets, induction by thrombopoietin, **292**, 987; brief  
commentary, **299**, 343
- Selectins  
on endothelial cells exposed to cigarette smoke, neutrophil capture  
by, **295**, 1150
- Selective adaptor ligation  
subtractive hybridization using, isolation of pathogen-induced  
Chinese cabbage genes by, **299**, 352
- [6,7]-Selenatryptophan  
synthesis and incorporation into dihydrofolate reductase, **298**, 257
- Selenite  
dysfunction of rat liver mitochondria by, **294**, 1130
- Selenocysteine  
effect on methionine sulfoxide reductase B incorporation and  
expression, **297**, 956
- SELEX  
selection of RNA aptamers to Alzheimer's disease amyloid peptide,  
**290**, 1583
- Self-splicing  
by *Tetrahymena* group I ribozyme, relationship to stability of the  
master domain, **291**, 1225
- Semicarbazide-sensitive amine oxidase  
aortic smooth muscle cells, role in methylglyoxal-AGE synthesis  
(bovine), **297**, 863
- Seminiferous tubules  
interleukin-1 $\alpha$  secretion (rat), **297**, 492
- Senescence  
acceleration by promotion of Bcl-2-linked apoptosis by nNOS  
upregulation, **297**, 517  
versus apoptosis, p53-dependent, promotion by Bcl-2 without  
effecting G1/S transition, **298**, 282  
cellular, regulatory role of mitochondria, **294**, 245  
diploid fibroblasts, associated upregulation of PDCD4 (human),  
**293**, 617  
global stress response during, induction in *Saccharomyces cerevisiae*  
cells lacking telomerase, **291**, 714  
replicative, high glucose-induced, **296**, 93  
role of VDUP1, **293**, 293
- Sepiapterin  
photooxidation in vitiligo: production of  $\text{H}_2\text{O}_2$  and pterin-  
6-carboxylic acid, **292**, 805
- Sepsis  
hemodynamic effects of exogenous adrenomedullin in healthy and  
endotoxemic sheep, **296**, 134  
increased tripeptidyl-peptidase II expression and activity in skeletal  
muscle during, **296**, 41
- SEREX  
identification of head and neck cancer antigens recognized by  
humoral immune system, **294**, 734  
serological cloning: identification as TBC domain-containing im-  
munogenic tumor antigen from prostate cancer cells, **290**, 830  
systemic sclerosis-associated autoantibody identification, **299**, 549
- Serial analysis of gene expression  
identification of TCDD-responsive genes in murine liver, **292**, 368
- Serine  
Ser530 role in allosteric behavior of muscle phosphofructokinase  
(rabbit), **290**, 670  
Ser-744 and Ser-748 phosphorylation in protein kinase D activation  
loop by protein kinase C $\theta$ , **291**, 444
- D-Serine  
transport via amino acid transporter ATB $^{0,+}$  expressed in colon, **291**, 291
- Serine proteinase  
involved in keratin degradation, isolation: proteinase D-1 (*Steno-*  
*trophomonas* sp.), **294**, 1138; erratum, **295**, 1034

- Serine proteinase substrates  
cleavage by NS3 protease of Langat virus, **294**, 16
- Serine–threonine kinase receptor  
type I, Alk8, binding of TGF- $\beta$  in presence of TGF- $\beta$ RII, **293**, 1556
- Serological analysis of recombinant cDNA expression libraries  
identification of head and neck cancer antigens recognized by humoral immune system, **294**, 734  
serological cloning: identification as TBC domain-containing immunogenic tumor antigen from prostate cancer cells, **290**, 830  
systemic sclerosis-associated autoantibody identification, **299**, 549
- Serotonin  
upregulation of single calcium channels in neurons, mechanisms (*Helix pomatia*), **293**, 132  
uptake, regulation by PKC, modulation by interaction of serotonin transporter C-terminal region and MacMARCKS, **294**, 272
- Serotonin receptor  
5-HT<sub>1A</sub> receptor coupling, C-terminus of Gi family of G proteins as determinant of, **294**, 655  
5-HT<sub>2C</sub> receptor mutant mice, energy expenditure, altered gene expression in, **295**, 249
- Serotonin transporter  
C-terminal region, interaction with MacMARCKS: modulation of 5-HT uptake regulation by PKC, **294**, 272
- Serpins  
apical secretion from MDCK cells independently of raft association, **299**, 35
- Sertoli cells  
follicle-stimulating hormone receptor gene expression, regulation by crosstalk of Krüppel transcription factors, **295**, 1096  
NYD-SP6 gene expression, **291**, 101  
peroxiredoxin I and II expression and upregulation by radiation (mouse), **296**, 337
- Serum  
cholesterol and triglyceride levels, effects of adenoviral overexpression of apolipoprotein A-V (mouse), **295**, 1156  
potentiation of cytochrome P450 1A1 induction by 3-methylcholanthrene, **297**, 249  
secreted CEACAM1 splice variants (rat), **292**, 749
- Serum amyloid A  
gene expression change in mouse liver induced by PPAR $\alpha$  agonists, microarray analysis, **290**, 1114
- Serum deprivation  
effect on expression of low-density lipoprotein receptor-related protein in cultured rat astrocytes, **299**, 102
- Serum- and glucocorticoid-induced protein kinase 1  
phosphorylation by PDK1, mediation by Na<sup>+</sup>/H<sup>+</sup> exchanger regulatory factor 2, **298**, 207
- Serum- and glucocorticoid-inducible kinase-like kinase  
phosphorylation of glycogen synthase kinase 3 $\beta$  at serine-9 through direct interaction, **293**, 1191
- Serum glycoproteins  
O-glycosylated, human, interactions with galactose-binding lectin from champedak, **295**, 1007
- Serum response element  
transactivation, *Helicobacter pylori* activation of c-fos through, **291**, 868
- Serum response factor  
activation dependent on PI-3-kinase, in estrogen regulation of c-fos gene expression in MCF-7 breast cancer cells, **294**, 384
- Serum transferrin  
hen, apo- and halo-forms, purification and X-ray studies, **295**, 125
- Seven-helix transmembrane receptor  
hypoxia-induced, expressed in pulmonary epithelial cells, genomic organization and regulation (human), **291**, 1160
- Severe myoclonic epilepsy  
in infancy, correlation with SCN1A mutations, **295**, 17
- Sex differences  
gene expression of organic anion transporters (rat), **290**, 482  
serum bisphenol A levels, **291**, 76  
steroid modulation of angiotensin II-induced protein kinase C activity in anterior pituitary of rat, **294**, 95
- SGK1, *see* Serum- and glucocorticoid-induced protein kinase 1
- Sgs1  
complex with topoisomerase III, formation of supercomplex with Mlh1–Mlh3 in meiotic yeast cells, **296**, 949
- SH2 domains  
C-terminal, of phospholipase C- $\gamma$ 1, AP180 binding to and inhibition of enzymatic activity, **290**, 35  
interaction with pY527, downregulation of kinase activity of Src by SH3 domain in absence of, **296**, 664  
p85, phosphorylation-independent sites on, binding of A-Raf kinase, **290**, 1267
- SH2 inhibitors  
high-affinity Src-SH2 ligands not activating Tyr<sup>527</sup>-phosphorylated Src in in vivo system, **298**, 185
- SH-3 antibodies  
recognition of distinct epitopes on CD73 from mesenchymal stem cells (human), **289**, 519; *erratum*, **290**, 1609
- SH3 domain  
dipalmitoyl peptide binding to, effects on intracellular signal transduction and tumor growth in vivo, **296**, 434  
Src, downregulation of kinase activity in absence of SH2 domain–pY527 interaction, **296**, 664
- SH-4 antibodies  
recognition of distinct epitopes on CD73 from mesenchymal stem cells (human), **289**, 519; *erratum*, **290**, 1609
- Shale oil  
carbazole removal by *Sphingomonas* sp. GTIN11, **297**, 242
- Shb  
interleukin-2 receptor signaling through, in T and natural killer cells, **296**, 929
- Shear stress  
activation of phosphatidylinositol 3-kinase and c-Jun N-terminal kinase in endothelial cells, role of Cbl, **292**, 892  
fluid-related, induction of COX-2 expression in MC3T3-E1 osteoblasts via PKA signaling pathway, **297**, 46  
mediation of tyrosylprotein sulfotransferase isoform shift in endothelial cells, **294**, 541; *erratum*, **295**, 1033  
oscillatory, effects on endothelial hydraulic conductivity and nitric oxide levels, **293**, 1466
- Shikimate kinase  
*Mycobacterium tuberculosis*, molecular model, **295**, 142
- Shikonin  
stimulation of glucose uptake in 3T3-L1 adipocytes via insulin-independent tyrosine kinase pathway, **292**, 642
- SHIP2  
overexpression, reduction of proliferation rate of K562 erythroleukemia cells, **296**, 106
- Shoot  
formation, cytokinin responses in, effects of overexpression of *Arabidopsis* response regulators ARR4 and ARR8, **293**, 806
- Short-chain alcohol dehydrogenase/reductase  
family member *hRDH-E2*, identification, and increased expression in psoriatic lesion, **297**, 1171
- Short interfering RNAs  
and antisense oligonucleotides, comparison in cell culture and in vivo, **296**, 1000  
inactivation of *Oct-3/4* and *c-mos* genes in mouse preimplantation embryos and oocytes using, **296**, 1372  
subtype- and species-specific knockdown of protein kinase C, **298**, 738
- Short neuropeptide F receptor  
*Drosophila melanogaster*, characterization, **297**, 1140



- Short tandem repeats  
diverse eukaryotic transcripts, implication of cellular functions, **298**, 581
- SHP  
nuclear translocation and visualization of interaction with HNF-4 $\alpha$  in living cells, **292**, 8  
regulation, role of LXR- and FXR-regulated pathways, **293**, 338
- SHP  
cDNA, molecular cloning and expression patterns in Nile tilapia, **297**, 632
- SHP-1  
interaction with Siglec-10, mapping of, **296**, 355
- SHP-2  
binding, abrogation by nitration of PECAM-1 ITIM tyrosines, **296**, 1171
- SHU9119  
melanotropin analogues of, modified at position 6, design and synthesis, **292**, 1075
- Sialic acid  
in platelet proteins, levels in diabetes, aging, and Hodgkin's lymphoma, **297**, 502
- Sialic acid synthase  
structural characterization (*Escherichia coli*), **295**, 167
- Sialoglycan  
from egg, induction of sperm acrosome reaction (sea urchin), **296**, 833
- O-Sialoglycoprotein endopeptidase  
and APEX nuclease, functional elements in bidirectional promoter of, identification (mouse), **296**, 785
- Sialyl Lewis<sup>x</sup>  
and E-selectin, inhibition of adhesion between, suppression of metastasis by macrophelide B via, **291**, 1065
- Side population cells  
in human nestin-positive islet-derived progenitor cells, defined by ABCG2 expression, **293**, 670
- Siglec-10  
splice variant cloning and mapping of interaction with SHP-1, **296**, 355
- Sigma factor 38  
*rpoS* gene from *Vibrio harveyi* encoding, cloning, sequencing, and functional studies, **293**, 456
- Signaling  
early apoptosis, induced by anti-Fas antibody or FasL in murine B lymphoma A20 cells, role of actin cytoskeleton, **290**, 268  
G $\alpha$ <sub>2</sub>, modulation by UNC5H2, **297**, 898
- Signaling pathways  
Akt/Gsk3/forkhead, regulation of myeloma cell growth, **297**, 760  
interleukin-6-mediated, regulation by TC-PTP via STAT3 dephosphorylation, **297**, 811  
receptor-mediated, related cytokines, **297**, 700
- Signal peptides  
human secretory, description and generation by hidden Markov model, **294**, 835  
targeting of penicillin amidase pre-pro protein to Tat translocation machinery (*Escherichia coli*), **291**, 146
- Signal recognition particle  
mammalian, SRP54 subunit, identification of homologue Ffh of *Streptococcus pneumoniae*, **292**, 601
- Signal transduction  
apoptotic, Fas-induced, suppression by thymidine phosphorylase independent of enzymatic activity, **295**, 300  
attenuated, associated with immune activation in HIV-1-infected individuals, **298**, 464  
between BMP2 and Erk2, role of Sp1, **297**, 116  
double-stranded RNA-mediated, block by monoclonal antibody against Toll-like receptor 3, **293**, 1364  
downregulation of phosphatidylcholine-hydrolyzing PLC and up-regulation of PLA by elicitors in plant cells, **293**, 766  
EGF/ERK2 nuclear signaling, attenuation by Naf1, **297**, 17  
intracellular, in vivo effects of dipalmitoyl peptide binding to SH3 domain, **296**, 434  
by IRAK-2, **297**, 52  
by IRAK-M, **293**, 1472  
low-temperature signal for induction of *OLE1* transcription in yeast, Mga2p identification as sensor of, **291**, 707  
in MAP kinase and PI3-kinase pathways, role in regulation of resistin expression, **299**, 291  
MHC class II-mediated, in resting B cell line, role of ERK, p38 MAP kinase, and PKC, **291**, 139  
phytochrome-mediated pathways in plants, **298**, 457  
T cell receptor-mediated  
differential regulation of CD3- $\epsilon$ -ITAM N- and C-terminal tyrosine phosphorylation, **291**, 574  
dynamic regulation by balancing kinase and phosphatase activities, **296**, 637
- Silver  
particles, effects on resonance energy transfer in labeled bovine serum albumin, **294**, 886
- Simian virus 40  
enhancer elements, plasmid vector with, and electroporation, effects on gene expression in mouse muscle, **298**, 505
- Simian virus 40 large T antigen  
fibroblasts immortalized by, calpain relationship to MMP-2 and u-PA expression in, **297**, 294
- Simian virus 40 T antigen  
transgenic mice expressing, immortal hepatocytes derived from, **294**, 864
- Sinensetin  
reversal of P-glycoprotein-mediated multidrug resistance, **295**, 832
- Single-nucleotide polymorphisms  
in osteoprotegerin gene promoter region, relationship to vascular morphology and function (human), **293**, 13  
thrifty genes for energy metabolism, evolutionary origins and targeting for intervention in obesity-related diseases, **295**, 207
- Single-strand conformation polymorphism  
PCR/SSCP analysis of complement C7 polymorphisms C7\*3 and C7\*4, **298**, 450
- Singlet oxygen  
quenching by curcumin, **295**, 62
- Sinusoidal membrane  
taurocholate efflux, correlation with hepatic expression of Mrp3, **299**, 681
- siRNA, see Short interfering RNAs
- Sitosterolemia  
ABCG5-ABCG8 gene cluster involved in, potential regulatory elements, comparative genome analysis, **295**, 276
- Size-exclusion chromatography  
functional ryanodine receptor isolation, **294**, 402
- Skeletal muscle  
adiposity, lowering by fenofibrate in OLETF rat, **296**, 293  
antioxidant enzyme inhibition by reactive nitrogen species donors in, specificity, **294**, 1093  
calcium release channel RyR1, stimulation by ADP-ribose (rat), **296**, 1267  
DNA electrotransfer into, interleukin-10 expression after, kinetic studies, **299**, 29  
endothelial cells, of NOS-knockout mice, VEGF expression during prazosin-induced angiogenesis, **297**, 1270  
fast fiber enhancer in muscle regulatory factor 4 gene promoter, **299**, 7  
gene electrotransfer into, description and physiological applicability of pulse generator, **296**, 443  
glucose uptake  
in ob/ob and db/db mice, effects of acute and chronic treatment with AICAR, **294**, 798  
promotion by leucine (rat), **299**, 693



- glycogen content, inverse relationship to phosphorylase *a* activity (mouse), **290**, 874
- heat shock protein 72 expression, activation by interleukin-6, **296**, 1264
- hyperplasia without hypertrophy, induction by missense myostatin mutant (mouse), **293**, 247
- I<sub>A</sub> channel inactivation, modulation by ATP (frog), **291**, 1287
- injury, induction of hepatocyte growth factor expression in spleen, **292**, 709
- mdx* mouse, dystrophin expression with short MCK 1350 promoter/enhancer, **292**, 626
- PGC-1 mRNA expression in epitrochlearis muscle, effects of low-intensity prolonged exercise (rat), **296**, 350
- SREBP-1c and lipogenic gene upregulation after exercise training, **296**, 395
- tripeptidyl-peptidase II expression and activity, increase during sepsis, **296**, 41
- UCP3 gene expression independent of genes for lipid transport and oxidation, activation by fasting, **294**, 301
- Skin**
- benzo(a)pyrene-induced p53 from, comparison of anti-p53 antibodies for immunoblotting (mouse), **293**, 850
- differentiation, processing of native caspase-14 at atypical cleavage site in, **296**, 911
- expression and function of melanin-concentrating hormone and receptor (human), **296**, 698
- expression of prion protein-like (*Fugu rubripes*), **294**, 912
- hair follicles, prostaglandin E<sub>2</sub> receptor subtype expression (mouse), **290**, 696
- rainbow trout, antimicrobial activity of ribosomal peptide from, **296**, 167
- sun-damaged, elastic fibers of, D-β-aspartic acid-containing peptides in, **294**, 1047
- UVB-induced squamous cell carcinoma, associated reduction of cyclin D1 ubiquitination (mouse), **298**, 377
- whole, cytochrome P450 expression (rat), **297**, 65
- wounding, vascular leakage induced by, reduction by loss of placental growth factor (mouse), **295**, 428
- Skin cells**
- biomarkers identified using DermArray DNA arrays and bioinformatics methods (human), **291**, 1052
- dermal papilla cells
- activation, fibroblast growth factor 5 inhibition of hair growth by blocking of, **290**, 169
- human hair, IFN-β secreted from, inhibition of growth of outer root sheath cells in vitro, **290**, 1133
- fetal, p53 somatic mutations responsible for extended replicative life span (macaque cells), **295**, 644
- Skin disease**
- connexin 30 mutations associated with, functional studies (human), **298**, 651
- Skin secretions**
- Tarahumara frog, inhibitory effects on growth of *Batrachochytrium dendrobatidis* in vitro, **297**, 361
- Skp1-binding proteins**
- F-box protein Pof10 in *Schizosaccharomyces pombe*, isolation and characterization, **290**, 1399
- SKY1**
- deletion in *Saccharomyces cerevisiae* *trk1Δtrk2Δ* mutant cells, dual effect on ion homeostasis, **295**, 1142
- SLC7A7 gene**
- y<sup>+</sup>L amino acid transporter-1 encoded by, green fluorescent protein-tagged normal and mutant forms, expression in mammalian cells, **291**, 1173
- Smad3**
- expression in bleomycin-induced pulmonary fibrosis, regulation by negative feedback loop of TGF-β signaling, **294**, 319
- mediation of TGF-β-induced fibronectin in mesangial cells, **296**, 1356
- restitution in human choriocarcinoma cells, restoration of TGF-β regulation of PAI-1, **294**, 1079
- Smad motif**
- with similarity to *Drosophila* MAD, characterization in mouse *Msx 1* promoter, **291**, 655
- Smad pathway**
- activation in diabetic mouse kidney, **296**, 1356
- Smads**
- interaction with CTCF-complex, role in TGF-β-induced APP gene transcription in astrocytes, **295**, 713
- Small-cell lung carcinoma cells**
- hyaluronan-dependent MMP-2 secretion, role of focal adhesion kinase (QG90 cells), **290**, 1123
- Small GTPase**
- Rho, induction of Na<sup>+</sup>, K<sup>+</sup>-ATPase in renal epithelial cells, **297**, 1231
- Small interfering RNAs**
- preformed, gene silencing in mammalian cells by, **295**, 744
- Small leucine-rich proteoglycans**
- bone, and components, inhibition of hydroxyapatite crystal growth, **292**, 727
- Small nuclear ribonucleoprotein**
- co-fractionation in multiprotein complex with *Drosophila* *crooked-neck* protein, **296**, 288
- Small nucleolar RNA**
- h5sn1, h5sn2, h5sn3, and h5sn4 genes, differential expression (human), **299**, 196
- methylation guide, in *Caenorhabditis elegans*, location of 2'-O-methyl nucleotides in, **297**, 1344
- Small ubiquitin-related modifier proteins**, see SUMO-1; SUMOylation
- Small unilamellar vesicles**
- phospholipid, of uniform size, preparation and analysis, **296**, 1352
- SMAP-29 (1–18)**
- isolated from sheep myeloid mRNA, antifungal mechanism against *Trichosporon beigelii*, **295**, 591
- Smaug**
- RNA-binding domain, crystallization and characterization, **297**, 1085
- Smoking**
- and *CYP2A6*\*7, \*8, and \*10 allelic frequencies among Japanese, Chinese, and Caucasians, **290**, 318
- effect on amino acid composition of apolipoprotein B100 of LDL and antioxidant status, **292**, 175
- Smooth muscle**
- coronary artery, membrane-bound guanylyl cyclase in, activation by resveratrol, **291**, 1218
- penile cavernous tissue and cultured cells, IP-10 expression induced by vascular endothelial growth factor (rat), **292**, 79
- Smooth muscle cells**, see also Vascular smooth muscle cells
- airway, thrombin-induced proliferation, attenuation by inhibitors of tyrosine kinase signaling cascade (guinea pig), **293**, 72
- cell cycle progression, effect of heme oxygenase-1, comparison with endothelial cells, **296**, 1077
- corpus cavernosum, IP-10 expression induced by vascular endothelial growth factor (rat), **292**, 79
- iris sphincter, tyrosine phosphorylation of PLC-γ1 in, stimulation by prostaglandin F<sub>2α</sub>, **297**, 1102
- proliferation inhibition, YC-1-mediated vascular protection through, **291**, 1014
- receptor-mediated ATP release evoked by Ang II, triggering by Ins(1,4,5)P<sub>3</sub> signal (*Taenia coli*), **293**, 686
- Snake venom**
- metalloproteinases in, generation of angiostatin-like molecules by, **294**, 879
- α-SNAP**
- expression level in pancreatic islets of diabetic GK rat, **291**, 1038

- SNAP-25**  
expression level in pancreatic islets of diabetic GK rat, **291**, 1038  
interaction with caveolin-1 in hippocampus, dependence on ATP, **291**, 1232
- SNARE**  
interaction with caveolin-1 in hippocampus, dependence on ATP, **291**, 1232
- SNURF** gene  
promoter region, identification and characterization of GC-rich proximal regulatory elements (mouse), **291**, 897
- SNX-L**  
expression in liver development (human), **299**, 542
- SOCS-3**  
expression in hypothalamus, increase with aging, effects of food restriction (rat), **296**, 425
- sod2**  
tissue-specific deletion, model mice for, **296**, 729
- Sodium arsenite**  
protection from, role of multidrug resistance protein 1, studies in vitro and in MRP1-deficient mice, **291**, 617  
restoration of p53 tumor suppressor pathway in cervical carcinoma cells (human), **293**, 298
- Sodium butyrate**  
effects on interleukin-18 gene expression in myeloid cells, **292**, 937  
genes responsive to, identification in colonic epithelial cells, **293**, 1287
- Sodium channels**  
 $\alpha$  subunits, D1 S4–S5 and D4–S5 intracellular linkers of, structural determinants of grayanotoxin action in, **295**, 452  
epilepsy-correlated  $\beta$ 1-subunit mutation, modulation of  $\text{Na}^+$  current in mammalian cells, **291**, 1095  
epithelial, hypotonicity-induced translocation in renal epithelial A6 cells, calmodulin-dependent regulation of, **298**, 619  
voltage-gated  
SCN1A gene mutations, correlation with severe myoclonic epilepsy in infancy, **295**, 17  
targeting by scorpion toxins kurtosin-like I and II, **299**, 562
- Sodium current**  
modulation in mammalian cells by epilepsy-correlated  $\beta$ 1-subunit mutation, **291**, 1095
- Sodium nitroprusside**  
specificity of antioxidant enzyme inhibition in skeletal muscle by, **294**, 1093
- Sodium salicylate**  
effect on expression of *MRP* and  $\gamma$ -glutamylcysteine synthetase genes in human colon cancer cells, **290**, 1427
- Sodium transporter**  
effects of mineralocorticoid deficiency (rat), **299**, 285
- Somatostatin receptors**  
subtype 1, effect on cell growth and calcitonin secretion in medullary thyroid carcinoma cell line (human), **297**, 828
- Somites**  
distinct regions, expression of *polyhomeotic* homologs *ph2 $\alpha$*  and *ph2 $\beta$*  during segmentation of zebrafish embryos, **291**, 245
- Sorbitol**  
effect on  $\alpha$ -chymotrypsin structure and activity, **293**, 416  
effect on oxygenase activity of Rubisco, **298**, 247
- Sorbitol dehydrogenase**  
overexpression, potentiation of glucose toxicity to cultured retinal pericytes, **299**, 183
- Sortilin**  
luminal domain, shedding in HT29 cell line, **298**, 760
- Sorting**  
exocrine secretory protein to regulated secretory pathway in endocrine cells, **299**, 98
- Sorting nexin**  
*SNX-L*, expression in liver development (human), **299**, 542
- SoxS**  
transcriptional activation in *Escherichia coli* by, pre-recruitment as mechanism of, **291**, 979; *erratum*, **294**, 1191
- SoxV**  
role in thiosulfate oxidation in *Rhodovulum sulfidophilum* and reduction of periplasmic thioredoxin SoxW, **296**, 737
- SoxW**  
periplasmic, reduction by SoxV orthologue of CdcA disulfide transporter in *Rhodovulum sulfidophilum*, **296**, 737
- Sp1**  
activation of rat connexin40 proximal promoter, **292**, 71  
mRNA, *trans*-splicing (rat), **298**, 156  
mutant zinc finger peptides, DNA binding affinity/specificity and amino acid number between ligand Cys, **296**, 553  
possible role in regulation of rat Mrp3 gene in intestinal cells, **291**, 270  
role in BMP2-upregulated Erk2 gene expression, **297**, 116  
role in promotion of transcription of APEX nuclease and *O*-sialoglycoprotein endopeptidase genes (mouse), **296**, 785  
upregulation in hepatoma cells, role in trichostatin A activation of IGFBP-3 promoter, **296**, 1005
- Sp1-like factors**  
transcriptional regulation of p14<sup>ARF</sup>, **291**, 1138
- Sp1/Sp3-binding GC-box**  
required for transcription of murine class II tumor suppressor gene H-rev107, **293**, 793  
role in induction of H-rev107 gene expression by growth arrest and histone acetylation, **294**, 63
- Sp3**  
activation of rat connexin40 proximal promoter, **292**, 71  
multiprotein complex with Sp1 and HDAC1, alteration by trichostatin A, **296**, 1005  
possible role in regulation of rat Mrp3 gene in intestinal cells, **291**, 270
- SP100 protein**  
interaction with NBS1, role in NBS1 recruitment into PML oncogenic domains, **299**, 863
- SpaB**  
heterologous expression and purification, **295**, 952
- SPAP2**  
cloning and characterization, **293**, 1037
- Specific granules**  
eosinophil, lysosomal characteristics (human), **291**, 844
- Speckles**  
*crooked-neck* protein accumulation (*Drosophila melanogaster*), **296**, 288
- $\beta$ II-Spectrin**  
schwannomin interactions with, effects of *Nf2* missense mutations, **290**, 366
- Speract**  
from egg, induction of sperm acrosome reaction (sea urchin), **296**, 833
- Spermatogenesis**  
in juvenile and pubertal testes, effects of neonatal exposure endocrine disruptors, **295**, 193  
novel testicular form of hormone-sensitive lipase (human), **291**, 286  
p59<sup>scr</sup> regulation during, in mouse, **292**, 992  
relationship to dynamin distribution in testis, **294**, 261  
RNF32 protein expressed during, double RING-H2 domain-containing (human), **292**, 58  
role of NYD-SP6 gene, **291**, 101
- Spermatogonia**  
proliferation and differentiation in newt testis organ culture, effects of human recombinant stem cell factor, **294**, 695
- Spermatozoa**  
acrosome reaction  
induction by egg fucose sulfate polymer, sialoglycan, and speract (sea urchin), **296**, 833



- species-specific induction by sea urchin egg sulfate fucan, structural requirements, **298**, 403
- flowering plant, cytosolic soluble protein factor triggering  $\text{Ca}^{2+}$  oscillations in mouse egg, **287**, 56; *erratum*, **290**, 613
- green fluorescence protein–carrier protein expression (mouse), **297**, 841
- tail, *Tep22* role (mouse), **297**, 737
- Sperm-attracting peptide
- mollusk: fertilization in *Sepia officinalis*, **296**, 1186
- Sperm factor
- flowering plant, cytosolic soluble protein factor triggering  $\text{Ca}^{2+}$  oscillations in mouse egg, **287**, 56; *erratum*, **290**, 613
- Spermidine/spermine  $N^1$ -acetyltransferase
- recombinant, phosphorylation by CK1 and effect on binding to mitochondria (human), **290**, 463
- Sphingobium chlorophenolicum*
- pentachlorophenol 4-monooxygenase subcellular localization, **299**, 703
- Sphingomonas* sp. GTIN11
- capable of carbazole metabolism in petroleum, isolation and characterization, **297**, 242
- Sphingomonas* sp. UG30
- tetrachlorohydroquinone reductive dehalogenase, characterization, **299**, 634
- Sphingomyelin
- and phosphatidylcholine, bilayers of, synergistic perturbation by diacylglycerol and cholesterol, **296**, 806
- Sphingomyelinase
- surface pressure-dependent modulation by c-Fos, **295**, 964
- Sphingosine kinase
- dependent directional migration of leukocytes, effect of phorbol ester (human), **297**, 806
- Sphingosine 1-phosphate
- migration of vascular endothelial cells and smooth muscle cells induced by, enhancement by EDG-5 antagonist, **299**, 483
- Spi-1/PU.1
- role in dual regulatory effects of human cytomegalovirus immediate-early protein in *ILB1* transcription, **294**, 854
- Spinal cord
- development, role of mammalian DSCAMs, **293**, 881
- Spinocerebellar atrophy type-1
- enhanced SUMOylation in, **293**, 307
- Spleen
- hepatocyte growth factor expression, induction by skeletal muscle injury, **292**, 709
- Splice site mutation
- aberrant, of *PEX16* gene in two patients with Zellweger syndrome, **292**, 109
- Splice variants
- CEACAM1, secreted, in rat cell lines and in vivo in serum, **292**, 749
- cyclin B3 mRNA (human), **291**, 406
- pregnane X receptor, identification in liver (human), **298**, 433
- RECQL helicase, molecular cloning (human), **298**, 789
- Sp1 mRNA, produced by *trans*-splicing (rat), **298**, 156
- truncated, KCNQ1 cloned from heart (rat), **294**, 199
- Splicing
- BACE1 mRNA in brain and pancreas (human), **293**, 30
- cyclic GMP-dependent protein kinase II, isoform formed by, inhibitory effects, **293**, 1438
- plant pre-mRNA in *Schizosaccharomyces pombe*, **293**, 1209
- production of retroviral vector transcripts lacking  $\Psi$ -region, **293**, 239
- RECQL helicase variant produced by, molecular cloning (human), **298**, 789
- TrkB gene, mechanism (human), **290**, 1054
- trans*-Splicing
- Sp1 mRNA (rat), **298**, 156
- Splicing factor compartments
- crooked-neck* protein accumulation (*Drosophila melanogaster*), **296**, 288
- Splicing factors
- co-fractionation in multiprotein complex with *Drosophila crooked-neck* protein, **296**, 288
- Splicing mutation
- prostacyclin synthase gene in family associated with hypertension, **297**, 1135
- Spontaneous excitatory postsynaptic current
- in substantia gelatinosa neurons, effect of hypoxia (rat), **295**, 929
- Spores
- aerial, *Streptomyces granaticolor*, protein expression and protein kinase activity during germination of, **299**, 335
- SPRE
- requirement for autoinduction of trefoil factor 2 promoter, **293**, 366
- Squalene epoxidase
- Konrad Bloch special issue, **292**, 1283
- transcriptional regulation, role of SREBP-2 and NF-Y, **295**, 74
- Squalene synthase
- Konrad Bloch special issue, **292**, 1261; *erratum*, **295**, 572
- Squalestatin I
- effect on expression of phenobarbital-inducible cytochromes P450, **291**, 378
- Squamous cell carcinoma
- head and neck, correlation of nitric oxide and cyclooxygenase-2 pathways in, **299**, 517
- UVB-induced, associated reduction of cyclin D1 ubiquitination (mouse), **298**, 377
- Src
- inhibitors of, attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72
- SH3 domain, downregulation of kinase activity in absence of SH2 domain–pY527 interaction, **296**, 664
- Tyr<sup>527</sup>-phosphorylated, in experimental in vivo system, high-affinity Src-SH2 ligands not activating, **298**, 185
- Src-1
- functional interaction with Brn-3a: coactivation of Brn-3a-mediated transactivation, **294**, 487
- Src family kinases
- independence of thrombin-stimulated Pyk phosphorylation in human endothelium from, **294**, 1001
- phosphorylation of 29-kDa caveolin-associated protein dependent on, **290**, 1447
- role in CD-31-induced signaling causing rapid adjustment of neutrophil cytoskeleton, **292**, 1092
- SRCR domain
- role of arginine residues in domain V of scavenger receptor MARCO in bacteria-binding activity, **290**, 1462
- Src-SH2 ligands
- high-affinity, not activating Tyr<sup>527</sup>-phosphorylated Src in experimental in vivo system, **298**, 185
- src*-suppressed C kinase substrate
- calmodulin and cyclin D anchoring sites, **290**, 1368
- gene expression, ligand-specific control, **297**, 1112
- SRP54 subunit
- of mammalian signal recognition particle, identification of *Streptococcus pneumoniae* homologue Ffh, **292**, 601
- SSAO, *see* Semicarbazide-sensitive amine oxidase
- ST2 protein
- induced by inflammatory stimuli, modulation of acute lung inflammation, **299**, 18
- Stable tubule only polypeptide
- interaction with neuronal tubulin, role of polyglutamylation (mouse brain), **297**, 787
- Staphylococcal enterotoxin A
- tumor cell apoptosis induced by, mediation by cytotoxic lymphocytes, cytokines, and nitric oxide, **290**, 1336



- Staphylococci  
gene expression in vitro and in vivo, genomic DNA as internal standard for, **291**, 528
- Staphylococcus aureus*  
methionine sulfoxide reductases from, purification, characterization, and substrate specificity, **290**, 62  
oxidative stress, induction by ciprofloxacin, **297**, 1003
- Starch  
hydrolysis by salivary amylase, mechanism: role of subsite S2' residues, **292**, 468
- Starvation  
male mice, fall of plasma osteocalcin during, prevention by leptin, **295**, 475  
posttranscriptional control of rat liver mitochondrial citrate carrier expression induced by, **299**, 418
- STAT1  
activation induced by IFN- $\alpha$  in hepatoma cells, modulation by IL-1 $\beta$  and IL-10 (human), **294**, 414  
phosphorylation, induction by fibroblast growth factor receptor 3 isoforms, **290**, 113  
suppression in hepatocytes, role of nuclear phosphatase and proteasome, **299**, 574
- Stat1  
role in downregulation of macrophage CD9 expression by interferon- $\gamma$ , **290**, 891
- STAT3  
activation by gp130 stimulation in hippocampal neurons, **295**, 532  
dephosphorylation, TC-PTP regulation of interleukin-6-mediated signaling pathway via, **297**, 811  
IL-6/gp130/STAT-3 signaling pathway, PGE<sub>2</sub> stimulation of prostatic intraepithelial neoplasia cell growth via, **290**, 249  
IL-6 induction of *Fli-1* proto-oncogene expression via, **292**, 287  
role in leptin induction of IL-1 receptor antagonist expression in brain, **294**, 215
- STAT4  
activated by IL-12 in NK cells, human perforin gene as direct target of, **297**, 1245
- STAT6  
phosphorylation, suppression by PPAR- $\gamma$  ligands, **295**, 547
- Stat6  
interleukin-4-activated, phytochemical inhibition, **292**, 841
- Statins  
and fibrates, as ligands for PPAR isotypes and effects on induction of PPARs/RXR $\alpha$  transcriptional activity, **290**, 131
- Staurosporine  
apoptosis induced by  
Mcl-1 downregulation in, **290**, 1275  
pro-apoptotic effect of CDK inhibitor p57<sup>Kip2</sup> (HeLa cells), **296**, 702  
enhancement of TIMP-1 expression in prostate cancer cells (human), **295**, 489  
neuroblastoma cell death induced by, caspase role: caspase assay discrepancy with zASP-CH<sub>2</sub>-DCB, **291**, 1022
- Stearoyl-CoA desaturase  
effects of leptin, troglitazone, and dietary fat, **297**, 1259  
gene transcription in yeast, induction by low temperature and oxygen, Mga2p identification as sensor of, **291**, 707  
inhibition by *cis*-9,*trans*-11 and *trans*-10,*cis*-12 isomers of conjugated linoleic acid in breast cancer cells, **294**, 785
- Stearoyl-CoA desaturase-1  
gene upregulation in skeletal muscle after exercise training, **296**, 395
- Stellate cells  
hepatic, *see* Hepatic stellate cells
- Stem cell factor  
human recombinant, effects on spermatogonial proliferation and differentiation in newt testis organ culture, **294**, 695  
role in mast cell chymase regulation of dermal mast cell number in mice, **290**, 1478
- Stem cells, *see also* Mesenchymal stem cells  
embryonic  
differentiation into retinal neurons, **297**, 177  
with single human chromosome 21, pre-mature neurons differentiated from, elevated apoptosis (mouse), **299**, 599  
hematopoietic, in umbilical cord blood, TIE2 function in, analysis (human), **298**, 731  
human cord blood somatic,  $\beta_2$ -microglobulin downregulation after transplantation into SCID mouse liver, **294**, 1052  
nestin-positive islet progenitor cells, side population cells expressing ABCG2 (human), **293**, 670  
review of bone tissue engineering, **292**, 1
- Stenotrophomonas* sp.  
keratin degradation, isolation of enzymes responsible for, **294**, 1138; *erratum*, **295**, 1034
- Stereoselective hydroxylation  
4-methyl-2-cyclohexenone, relevance to *R*-(+)-pulegone-mediated hepatotoxicity (rat), **297**, 202
- Steroid binding protein  
lens membrane fractions containing, immunomagnetic capture, **295**, 1027
- Steroid degradation  
identification of *Comamonas testosteroni* gene encoding steroid-inducible extradiol dioxygenase, **294**, 560
- Steroidogenesis  
in juvenile and pubertal testes, effects of neonatal exposure to endocrine disruptors, **295**, 193  
suppression, and apoptosis induction, by TNF- $\alpha$  in granulosa cells, **294**, 51
- Steroid receptor coactivator-1  
transactivation mediated by thyroid hormone receptor/SRC-1 complex, suppression by polychlorinated biphenyls, **299**, 384
- Steroids  
anti-inflammatory profile and bronchodilator effect of NO-steroids, **290**, 125
- Sterol carrier protein  
and activity of membrane-bound enzymes, Konrad Bloch special issue, **292**, 1293
- Sterol regulatory element  
E-box-like, mediation of  $\Delta^6$  desaturase suppression by highly unsaturated fatty acids, **296**, 111
- Sterol regulatory element binding protein-1c  
gene upregulation in skeletal muscle after exercise training, **296**, 395  
promoter, regulation in primary rat hepatocytes, **290**, 256  
regulation of fatty acid supply for phospholipids as primary role in liver, **296**, 111
- Sterol regulatory element binding protein-2  
role in transcriptional regulation of squalene epoxidase, **295**, 74
- Sterol response element binding protein 1  
transcription in adipocytes, relationship to insulin-stimulated fatty acid synthase gene expression, **291**, 439
- Sterols  
Konrad Bloch special issue  
biosynthesis, the early days, **292**, 1129  
in mycoplasmas, **292**, 1289
- Stomach  
mucin synthesis, disruption by *Helicobacter pylori* lipopolysaccharide, role of ERK and p38 MAP kinase, **294**, 220  
mucosa, conversion to intestinal metaplasia in Cdx2-expressing transgenic mice, **294**, 470
- Stomach cancer cells  
growth inhibition by anticancer drugs, sensitizing effect of enhanced IGFBP-3 expression, **294**, 480

- STOP, *see* Stable tubule only polypeptide
- Str13/Clast5  
as negative regulator of B cell activation, **292**, 121
- Streptococcal immunoglobulin-binding protein 35  
anchorless, characterization, **296**, 1329
- Streptococcus mutans*  
binding to extracellular matrix molecules and fibrinogen, **298**, 75
- Streptococcus pneumoniae*  
Ffh identification and characterization: homologue of SRP54 subunit of mammalian signal recognition particle, **292**, 601
- Streptococcus pyogenes*  
anchorless surface protein binding to human immunoglobulins, **296**, 1329
- Streptokinase  
C-terminal domain, specificity role in plasminogen activation, **290**, 585
- Streptomyces clavuligerus*  
deacetoxycephalosporin C synthase, C-terminal modification and enzyme activity, **295**, 55
- Streptomyces granaticolor*  
aerial spore germination, protein expression and protein kinase activity during, **299**, 335
- Streptomyces griseus*  
cell wall autolysis, induction by  $\beta$ -lactams via depolarization of membrane potential, **290**, 1169
- Streptomyces lavendulae*  
penicillin acylase substrate specificity, **291**, 593
- Streptozocin  
diabetes induced by, Smad pathway activation in kidneys of mice with, **296**, 1356
- Stress  
endoplasmic reticulum, apoptosis mediated by, and caspase-12, **293**, 722  
and liver injury, mRNA profiles in, comparison of lethal and nonlethal rat models, **290**, 518  
mediating, hypocretin/orexin peptides as sensitive key relay for, **296**, 129  
oxidative, *see* Oxidative stress  
psychological, effects on bilirubin metabolites in urine (human), **293**, 517
- Stress-activated protein kinase, *see* c-Jun N-terminal kinase
- Stress genes  
promoters, interaction with TATA-binding protein, surface plasmon resonance measurement, **298**, 625
- Stress resistance  
*Escherichia coli*, role of OmpA, **292**, 390
- Stress response  
global, induction in *Saccharomyces cerevisiae* cells lacking telomerase, **291**, 714  
in liver after toxic drug exposure, role of macrophage migration inhibitory factor, **294**, 225  
transcriptional activation of human ATF3 by p53, **297**, 1302
- Stretch-activated channels  
role in increase of  $\text{Ca}^{2+}$  levels in cultured chick myoblasts, **290**, 1176
- Striatum  
dopamine clearance, effect of cocaine (rat), **290**, 1545
- Stromal cell-derived factor 1A  
gene overexpression in rheumatoid synovial fibroblasts, **294**, 1121
- Stromal cells  
adipose-derived  
chondrogenic potential in vivo and in vitro, **290**, 763  
neurogenic differentiation (human, mouse), **294**, 371  
RANKL gene expression, epigenetic control (mouse), **293**, 126
- Strontium  
extracellular cations, binding to tandem dimers of CNG channel, **298**, 478
- Structural genomics  
application of protocol based on HN(C)N experiment for resonance assignments in ( $^{15}\text{N}$ ,  $^{13}\text{C}$ )-labeled proteins, **293**, 427
- Subepithelial mesenchyme  
collagen turnover in, coordinate facilitation by TGF- $\beta$ 1 and HGF, **297**, 255
- Subsite role  
favoring of catalysis or substrate binding by subsites of trypsin active site, **290**, 494
- Substantia gelatinosa  
neurons of, excitatory transmission in, effect of hypoxia (rat), **295**, 929
- Substantia nigra  
entire mitochondrial genome in Parkinson's disease, sequence analysis, **290**, 1593
- Substrate binding  
or catalysis, favoring by subsites of trypsin active site, **290**, 494
- Substrate cleavage  
species-specific differences, caspase, **297**, 1186
- Substrate-heme complex method  
rationalization of oxazolidinone-based compounds as inhibitors of aromatase, **294**, 380
- Subtilin  
biosynthesis, SpaB involved in, heterologous expression and purification, **295**, 952
- Subtilisin YAB-G124A  
autoprocessing site, mutational analysis, **291**, 165
- Subtractive hybridization  
using selective adaptor ligation, isolation of pathogen-induced Chinese cabbage genes by, **299**, 352
- Sucrose  
lowering of oxygenase activity of Rubisco, **298**, 247
- Sugar alcohols  
potential to curtail oxygenase activity of Rubisco, **298**, 247
- Sugars  
high-mannose, binding to domain-swapped dimeric form of cyanovirin-N in solution, **298**, 598  
potential to curtail oxygenase activity of Rubisco, **298**, 247
- Suicide gene therapy  
human hepatoma and peritonitis carcinomatosis by vector of replicative-deficient herpes simplex virus, **291**, 855
- Sulfakinin  
disulfated, from central nervous system of white shrimp, isolation, identification, and synthesis, **299**, 312
- Sulfakinin receptor  
DSK-R1, cloning and functional expression (*Drosophila melanogaster*), **291**, 313
- 4'-O-Sulfamoyl-4-biphenyl  
derivatives of compounds based on, design, synthesis, and evaluation as estrone sulfatase inhibitors, **294**, 180
- Sulfated fucan  
from sea urchin egg, species-specific induction of sperm acrosome reaction, structural requirements, **298**, 403
- Sulfated tyrosine  
hormonogenic tyrosine 5 of porcine thyroglobulin, **298**, 193
- Sulfation  
catecholestrogen, role in carcinogenesis, **292**, 402
- Sulfolobus solfataricus*  
hexaprenyl diphosphate synthase, product specificity change by introduction of mimetic mutations, **297**, 1097
- Sulfolobus tokodaii*  
reverse gyrase, 3D electron microscopy, **297**, 749
- Sulfonylurea receptor  
identification as subunit in ATP-sensitive  $\text{K}^+$  channels in vascular smooth muscle cells (rat), **296**, 463  
nucleotide-binding folds of, expression, purification, and interaction, **294**, 191

- Sulfonylureas  
tobacco acetolactate synthase resistance to, role of lysine residues 219 and 255, **293**, 433
- Sulfur mustard  
induction of arachidonic acid release, mediation by phospholipase D in human keratinocytes, **295**, 1062
- Sulindac  
effect on gene expression profile of colon cancer cells, **292**, 498  
induction of *MRP1* and *MRP3* and  $\gamma$ -glutamylcysteine synthetase genes in human colon cancer cells, **290**, 1427
- SUMO-1  
interaction with SALL1, **296**, 870  
modification of Daxx, **295**, 495
- SUMOylation  
Daxx, effects on nuclear translocation and sequestration to PML oncogenic domains, **295**, 495  
enhancement in polyglutamine diseases, **293**, 307
- Sun damage  
elastic fibers of affected skin, D- $\beta$ -aspartic acid-containing peptides in, **294**, 1047
- Superantigen  
tumor cell apoptosis induced by, mediation by cytotoxic lymphocytes, cytokines, and nitric oxide, **290**, 1336
- Supernatant protein  
and activity of membrane-bound enzymes, Konrad Bloch special issue, **292**, 1293
- Supernatant protein factor  
relevant to membrane-bound enzymes, Konrad Bloch special issue, **292**, 1293
- Superoxide anion  
activation of constitutive nitric-oxide synthase in brain particulate fraction, **296**, 413  
intracellular levels, decrease in, role in establishment of permissive apoptotic environment, **290**, 1145  
reconstituting ability of cytochrome *b<sub>558</sub>*, conferral by Caco-2 cell-expressed p67<sup>phox</sup> homolog with recombinant p47<sup>phox</sup>, **296**, 1322  
removal by creatine, **290**, 47  
scavenging effect of curcumin, **295**, 62
- Superoxide dismutase  
activity in hypoxia–reoxygenation-exposed myocytes, effects of mixed tocopherol preparation vs tocopherol alone, **291**, 349  
chemical induction in vascular smooth muscle cells and protective effect on oxidative injury, **292**, 50; *erratum*, **294**, 1192
- Cu,Zn-SOD  
effect on cholesterol metabolism in hepatocarcinoma cells, **295**, 603  
inhibition of yeast ribosomal stalk phosphorylation, **296**, 1310  
role in *Schizosaccharomyces pombe* cell cycle progression, **297**, 854  
dynamic and biphasic modulation of nitrosation, **295**, 1125  
effect on hemozoin synthesis promoted by *Plasmodium yoelii* homogenate, **290**, 595  
extracellular, nuclear translocation, **296**, 54
- Mn-SOD  
from *Bacillus halodenitrificans*, crystallization and crystallographic analysis, **294**, 60  
gene, tissue-specific deletion of, model mice for, **296**, 729  
gene, transcriptional regulation, effects of histone acetylation, **295**, 187  
mitochondrial, elevated levels after ablation of cellular prion protein expression, **291**, 372  
skeletal muscle, inhibition by reactive nitrogen species donors, specificity, **294**, 1093
- Suppression subtractive hybridization  
gene expression in murine oviduct: effects of early developing embryo, **292**, 564
- Suprachiasmatic nucleus  
immortalized cells, expression of components of multiple circadian regulatory pathways (SCN 2.2 cells), **292**, 20  
synchronization and phase-resetting by glutamate in immortalized cell line, **298**, 133
- Surface plasmon resonance  
ALG-2 interaction with annexin XI N-terminal domain in Ca<sup>2+</sup>-dependent manner, **291**, 1166  
calmodulin interaction with protein serine/threonine phosphatases with EF-hand domains, **293**, 1047  
definition of discrete TrkB receptor domain with binding sites for BDNF and NT-4, **291**, 501  
metformin effects on glucagon-like peptide-1 degradation by dipeptidylpeptidase IV, **291**, 1302  
TATA-binding protein–promoter interaction, **298**, 625
- Surfactant protein C  
proprotein mutants, palmitoylation, differential effects of brefeldin A, **290**, 532
- Survivin  
expression during liver regeneration, **297**, 59
- SWI/SNF chromatin remodeling complex  
mammalian, role of nuclear actin-related protein ArpN $\alpha$ , **299**, 328
- SYBR Green  
real-time PCR based on, monitoring of TGF- $\beta$  isoform mRNA expression during hepatic stellate cell transdifferentiation, **295**, 330; *erratum*, **296**, 1035
- Syk  
inhibitors of, attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72
- Synaptic transmission  
excitatory, in substantia gelatinosa neurons, effect of hypoxia (rat), **295**, 929
- Synaptosomes  
constitutive nitric-oxide synthase in, activation by superoxide, **296**, 413
- Synaptotagmin III  
downregulated expression in pancreatic islets of diabetic GK rat, **291**, 1038
- Synaptotagmin-like protein 5  
with C-terminal tandem C2 domains, interaction with GTP-bound Rab27A, **293**, 899
- Synchronization  
poorly synchronized Ca<sup>2+</sup> transients, novel type, generation in insulin-secreting INS-1 cells, **293**, 842
- Syndecan-1  
recombinant, with truncated core protein: minican expression and characterization, **290**, 146
- Synechococcus*  
paralogous *ppa* genes encoding Family I pyrophosphatases, expression and inactivation, **295**, 890
- Synechocystis*  
module fusion in A-type flavoprotein from, condensation of multiple-component pathway in single polypeptide chain by, **294**, 82  
sp. PCC 6803, gene expression in response to salt stress and hyperosmotic stress, **290**, 339
- Synovium  
genetic transduction in vivo into, by electroporation, **293**, 1530  
rheumatoid  
genes causing tumor-like growth in, overexpression in rheumatoid synovial fibroblasts, **294**, 1121  
microcirculation, parathyroid hormone-related protein and cognate receptor expression (human), **297**, 890
- Syntaxin  
interaction with caveolin-1 in hippocampus, dependence on ATP, **291**, 1232



- synthetic vectors  
 proteolipidic, for gene transfer to lung, **290**, 1489
- 2-Syntrophin/utrophin complex  
 interaction with ATP-binding cassette transporter A1 carboxy-terminus, **293**, 759
- system A transporter  
 mRNA, selective upregulation in diabetic liver (rat), **290**, 903
- systemic lupus erythematosus  
 AHNK identification as autoantigen in, **291**, 951  
 anti-elongation factor 2 kinase antibody detection (human), **293**, 1073  
 associated autoantibodies, identification, **295**, 125  
 B cell targets in, identification by immunoscreening of phage-displayed cDNA-encoded polypeptides, **298**, 169
- systemic sclerosis  
 autoantibody to DNA binding protein B as serologic marker in, **299**, 549
- system N transporter  
 in diabetic rat liver, effect of streptozotocin treatment, **290**, 903
- T
- T2BP  
 activation of NF- $\kappa$ B and AP-1 without TNF stimulation, **290**, 1108
- T-614  
 stimulation of osteoblastic differentiation in vitro and BMP-2-induced bone formation in vivo, **299**, 903
- Tacalcitol  
 effect on expression of CSF-1 and receptor in human dendritic cells, **297**, 1211
- Tacrine  
 with lithium chloride, enhancement of nNOS expression triggering limbic seizures and hippocampal damage (rat), **291**, 255
- TAK1  
 TAK1-TAB1 fusion protein: constitutively active MAP3K stimulating AP-1 and NF- $\kappa$ B signaling, **297**, 1277
- Talin  
 major lipid-binding domain, membrane fusion induced by, **295**, 636
- Tandem dimers  
 CNG channel, binding symmetry of extracellular divalent cations to, **298**, 478
- Tandem repeats  
 mononucleosomes assembled on DNA fragment containing (GGA/TCC)<sub>n</sub> repeats, formation of DNA–DNA complex, **290**, 16
- Tangier disease  
 ATP-binding cassette transporter-1 mutations in Japanese patients, expression and functional analyses, **290**, 713
- T antigen  
 simian virus 40  
 cells immortalized by, calpain relationship to MMP-2 and u-PA expression in, **297**, 294  
 immortal hepatocytes derived from transgenic mice expressing, **294**, 864
- Taq DNA polymerase  
 kinetic parameters during rapid cycle PCR, **299**, 715
- Targeted gene correction  
*hprt* mutations, by 45-base single-stranded oligonucleotides, **299**, 787
- Targeted ligation assay  
 RecA-promoted sliding of base pairs within repeats, **296**, 983
- Tartrate-resistant acid phosphatase  
 recombinant, phosphatase and oxygen radical-generating activities (rat), **292**, 128
- TAT  
 fusion proteins, transduction into osteoclasts and osteoblasts, **299**, 505
- Tat  
 HIV-1, in latently infected cells, and viral replication, effects of IFN- $\gamma$ , **291**, 890  
 translocation machinery, *E. coli* penicillin amidase targeting by unusual signal peptide to, **291**, 146
- TATA-binding protein  
 interaction with promoter, surface plasmon resonance measurement, **298**, 625
- Tau protein  
 hyperphosphorylation, role of p35 cleavage to p25, **298**, 693  
 microtubule-binding domain, amphipathic helical behavior of third repeat fragment in, NMR study, **294**, 210
- Taurocholate  
 sinusoidal efflux, correlation with hepatic expression of Mrp3, **299**, 681
- TBC domain  
 immunogenic tumor antigen PARIS-1 containing, from prostate cancer cells, serological cloning, **290**, 830
- T box genes  
 hTBX5, induction of apoptosis and inhibition of cell growth by, **297**, 185  
 TBX3, role in retina dorsal/ventral patterning (*Xenopus laevis*), **290**, 737
- TBP-interacting protein 120B  
 induced in relation to myogenesis, binding to NOT3, **296**, 1097
- T-cap/telethonin  
 titin binding to, reduction caused by titin mutations in dilated cardiomyopathy, **291**, 385
- TCDD, *see* 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin
- T cell epitopes  
 and homology modeling of cellulose-binding domain of rye grass pollen allergen, **296**, 1346
- T cell receptor  
 $\beta$  chain locus, histone H3 acetylation in variable regions of, relationship to gene expression, **298**, 420  
 $\gamma\delta$ , T cells expressing, modulation in mouse buccal epithelium after antigen priming, **294**, 626  
 Rac-2 and IL-2 transcription activation induced by, mediation by DOCK2, **296**, 716  
 signal transduction  
 differential regulation of CD3- $\epsilon$ -ITAM N- and C-terminal tyrosine phosphorylation, **291**, 574  
 dynamic regulation by balancing kinase and phosphatase activities, **296**, 637
- T cells  
 calpain II colocalization with detergent-insoluble rafts on human and Jurkat cells, **295**, 540  
 CB2 receptor expression, autocrine and paracrine regulation by TGF- $\beta$ , **290**, 91  
 CD3- $\epsilon$ -ITAM N- and C-terminal tyrosines, phosphorylation, differential regulation, **291**, 574  
 Con A-induced proliferation, stimulation by  $\beta$ -endorphin-like peptide SLTCLVKGFY, **292**, 799  
 deregulation, and ionic interaction of HIV-1 V3 domain with CCR5, **298**, 574  
 Fas-resistant HTLV-I-infected, blockade upstream of caspase cascade, suppression by cycloheximide, **294**, 714  
 $\gamma\delta$  T cell receptor-expressing, modulation in mouse buccal epithelium after antigen priming, **294**, 626  
 interleukin-2 receptor signaling through Shb adapter protein, **296**, 929  
 Jurkat, *see* Jurkat cells  
 naive CD4<sup>+</sup>, fates of, determination by hierarchical signaling thresholds, **299**, 148  
 peripheral blood, in atopic dermatitis, *ETEA* gene highly expressed in, cloning and characterization, **297**, 1282  
 protein kinase C $\theta$  regulation of protein kinase D, **291**, 444

- response to bovine serum albumin: epitope characterization, **293**, 1348
- stimulation, effects of dexamethasone and  $1\alpha,25$ -dihydroxyvitamin D<sub>3</sub> analog, **297**, 645
- Tctex2-related dynein light chain
- dephosphorylation by type 2A protein phosphatase (rainbow trout), **297**, 800
- TCV-116
- blockade of angiotensin AT1a receptor signaling, effects on tumor growth, angiogenesis, and metastasis, **294**, 441
- Tea
- green, catechins in, interaction with and effects on export function of P-glycoprotein, **297**, 412
- white and green, inhibition of  $\beta$ -catenin/Tcf activity, and H<sub>2</sub>O<sub>2</sub> generation, **296**, 584
- Tefluthrin
- modulation of anionic background conductance I<sub>AB</sub> in guinea pig ventricular myocytes, **292**, 208
- TEL
- functional regulation by p38-induced phosphorylation, **299**, 116
- induction of aggregation in transformed cells and tube formation in NIH3T3-UCLA cells, **291**, 820
- TEL/AML1 fusion protein
- cellular localization, correlation with repression of AML1-mediated transactivation of CR1 gene, **297**, 91
- Telomerase
- activation, requirement for immortalization of human mesenchymal stem cells, **295**, 354
- overexpression, effect on high glucose-induced replicative senescence, **296**, 93
- reconstitution using human catalytic subunit expressed in insect cells, **298**, 144
- Saccharomyces cerevisiae* cells lacking, global stress response induction in, **291**, 714
- Telomerase-associated protein
- structural domains in, role in vault assembly, **291**, 535
- Telomere length variation
- interchromosomal, correlation of relative telomeric repeat content with chromosome size, **291**, 210
- Tenascin-C
- relationship to PDGF receptor- $\alpha$  deficiency in glomerular mesangial cells (mouse), **290**, 1220
- Tenascins
- association with lipid rafts isolated from mouse brain, **294**, 742
- Tensin
- homologue C1-TEN, interaction with Ax1 receptor tyrosine kinase, **299**, 793
- Tep22
- role in biogenesis of acrosome and sperm tail midpiece (mouse), **297**, 737
- Terminal restriction fragment analysis
- interchromosomal telomere length variation, **291**, 210
- Terpenoids
- derived from Umbelliferae, agonist/antagonist activities for estrogen receptors  $\alpha$  and  $\beta$ , **291**, 354
- Terrabacter* sp.
- strain DBF63 genome, dispersion of dioxin catabolic genes on, **296**, 233
- Testis
- and brain, 3'-phosphoinositide-dependent protein kinase-1 isoform mPDK-1 $\beta$  specific to, cloning and characterization, **294**, 136
- cancer/testis antigen gene *CAGE* identification and characterization, **292**, 715
- development and spermatogenesis, role of NYD-SP6 gene, **291**, 101
- dynamain distribution, relationship to spermatogenesis, **294**, 261
- erythropoietin production (mouse), **296**, 145
- expression of murine BTB/POZ zinc finger gene *Znf131*, **296**, 319
- fragments, organ culture, spermatogonial proliferation and differentiation in, effect of rhSCF (newt), **294**, 695
- hormone-sensitive lipase, novel, characterization (human), **291**, 286
- immunoglobulin superfamily gene preferentially expressed by, molecular cloning, **296**, 1215
- interleukin-1 $\alpha$  production and secretion (rat), **297**, 492
- juvenile and pubertal, organ weight and steroidogenesis, effects of neonatal exposure to endocrine disruptors, **295**, 193
- library, head and neck cancer antigens recognized by humoral immune system, **294**, 734
- low-molecular-weight dual-specificity phosphatases expressed in, identification and characterization, **298**, 545
- nuclear extract, photoaffinity labeling of proteins (bovine), **297**, 714
- p59<sup>scr</sup> mRNA upregulation during sexual maturation and role in germ cell development (mouse), **292**, 992
- peroxiredoxin I and II expression and upregulation by radiation (mouse), **296**, 337
- RNF32 protein expressed in, double RING-H2 domain-containing (human), **292**, 58
- Tep22, role in biogenesis of acrosome and sperm tail midpiece (mouse), **297**, 737
- ubiquitin-protein ligase E3A, HECT domain of, interaction of VCY2 protein with, **296**, 1104
- Testosterone
- correlation with serum bisphenol A levels, **291**, 76
- extradiol dioxygenase inducible by, identification of *Comamonas testosteroni* gene encoding, **294**, 560
- and gene expression of apoA-I, hepatic lipase, scavenger receptor B1, and ABCA1 in hepatocytes and/or macrophages, **296**, 1051
- levels during starvation in male rat, effect of leptin, **295**, 475
- Tetrabromobisphenol A
- thyroid hormone-disrupting activity, **293**, 554
- Tetrachlorobisphenol A
- thyroid hormone-disrupting activity, **293**, 554
- 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin
- catabolism, genes for, dispersion on *Terrabacter* sp. DBF63 genome, **296**, 233
- effect on cell attachment and adherens junction proteins in human uterine RL95-2 cells, comparison with benzo[a]pyrene, **294**, 101
- gene responsive to, identification in liver by serial analysis of gene expression (mouse), **292**, 368
- induction of adseverin expression in thymus, regulation by aryl hydrocarbon receptor (mouse), **291**, 1194
- as possible activator of human cytomegalovirus replication in human fibroblast cell line, **296**, 651
- stimulation of synthesis and secretion of IgE-dependent histamine-releasing factor, **290**, 984
- Tetrachlorohydroquinone reductive dehalogenase
- from *Sphingomonas* sp. UG30, characterization, **299**, 634
- 12-*O*-Tetradecanoylphorbol 13-acetate, *see* Phorbol myristate acetate
- Tetraethylammonium
- cellular uptake mediated by mouse cation transporter mOCT2 compared with mOCT1, **296**, 644
- Tetrahydrobiopterin
- synthesis in V-1-overexpressing PC12D cells, **293**, 962
- Tetrahydrofuran diols
- mixture of, identification as endocrine disrupting agent with mitogenic activity (corn), **291**, 692
- Tetrahymena*
- cytokinesis initiation, regulation by Ca<sup>2+</sup>/calmodulin-dependent p85 binding to G-actin, **292**, 1098
- Tetrahymena* group I ribozyme
- self-splicing activity, relationship to stability of master domain, **291**, 1225
- Tetramethylrhodamine methyl ester
- in high-throughput measurements of mitochondrial membrane potential in neural cell line, **298**, 750



- Tetrasaccharides**  
 minimal heparin/heparan sulfate sequences for binding to FGF-1, **292**, 222  
 structurally related to repeating unit of pullulan, enzymatic synthesis and characterization, **297**, 382
- Tetraspanins**  
*PLS1*-related, gene family in fungi, **297**, 1197
- TFIIH**  
 components of, effects on HIV-1 Vpr glucocorticoid receptor coactivator activity and cell cycle arresting activity, **298**, 17  
 XPB and XPD subunits, association of human RAD52 protein with, **297**, 1191
- TGN38**  
 interactions with centrosome, role in nucleation of Golgi apparatus, **291**, 494
- Thapsigargin**  
 binding to and inhibition of cloned vanilloid receptor-1, **293**, 777  
 induction of  $\text{Ca}^{2+}$  influx through store-operated calcium channels, effect of actin cytoskeleton, **296**, 484
- Thermal inactivation**  
 protective antigen of *Bacillus anthracis*, role of Gln277 and Phe554 residues, **296**, 1058
- Thermal stability**  
 $\alpha$ A-crystallin and  $\alpha$ B-crystallin, comparison, **295**, 854  
 $\alpha$ B-crystallin, porcine, enhancement by C-terminal lysine truncation, **297**, 309  
 CYP2D6.10 in human liver microsomes, **293**, 969  
 GPI-alkaline phosphatase from bovine intestine, **292**, 874  
 lysozyme, and folding kinetics, linear correlation between, **291**, 795
- Thermal unfolding**  
 association of heat-induced conformational change with activity loss of Rubisco, **290**, 1128  
 stabilization of molten globule state of papain by urea, **290**, 1441
- Thermoascus aurantiacus*  
 major endoglucanase from, atomic resolution structure, **296**, 161
- Thermococcus kodakaraensis* KOD1  
*Tk*-PTP protein tyrosine/serine phosphatase, enzymatic characteristics and substrate protein identification, **295**, 508
- Thermodynamics**  
 interfacial enzymatic catalysis, analysis by differential scanning calorimetry, **297**, 446  
 systems approach to evolution, editorial, **297**, 689
- Thermosynechococcus elongatus*  
 small heat-shock protein gene, imperfect inverted repeat in, specific binding of protein to, **297**, 616
- Thermotoga maritima*  
 amylolytic enzyme resembling cyclodextrinase and  $\alpha$ -glucosidase, liberation of glucose from reducing end of substrates, **295**, 818
- Thermus thermophilus*  
 FtsH from, complex between unfolded protein and, stabilization mechanism, **296**, 8
- Thiamin diphosphate**  
 interaction with apotransketolase, origin of absorption band induced through interaction between, **294**, 155
- Thiamine**  
 and phosphate esters of, simultaneous detection from microalgae by HPLC, **291**, 344
- Thin-layer chromatography**  
 chondroitin sulfates from wild-type *Caenorhabditis elegans*, **293**, 1374
- Thioacetamide**  
 liver cirrhosis induced by, hepatectomy in rats with, effects on CCAAT/enhancer-binding protein, AP-1, and cyclins, **292**, 474
- Thiol**  
 synthetic peptides with, retention of antioxidant activity of apolipoprotein A-I<sub>Milano</sub>, **297**, 206
- Thiol oxidation**  
 role in selenite induction of mitochondrial permeability transition (rat liver), **294**, 1130
- Thioltransferase**  
 glutaredoxin, GSH-dependent peroxidase activity (rice), **296**, 1152  
 related activity in ebselen, **291**, 550
- $\gamma$ -Thionin  
 gene related to, induction during cold acclimation (winter wheat), **298**, 46
- Thioredoxin**  
 calcium-dependent oxidation during cellular growth initiation, **290**, 624  
 interaction with C-propeptide region of human pro  $\alpha$ 1 type 1 collagen, **295**, 663  
 periplasmic, SoxW, reduction by CdcA disulfide transporter orthologue SoxV (*Rhodovulum sulfidophilum*), **296**, 737
- Thioredoxin reductase**  
 reduction of lipid hydroperoxides and sparing of  $\alpha$ -tocopherol in biomembranes, **292**, 45
- Thiosulfate oxidation**  
 in *Rhodovulum sulfidophilum*, role of SoxV, and SoxV reduction of periplasmic thioredoxin SoxW, **296**, 737
- 3q21q26 syndrome**  
 abnormal megakaryocytic differentiation in, role of EVI1 gene expression, **292**, 609
- Threonine**  
 Thr 136 key role in differential coupling of  $\alpha$ 1-adrenergic receptor subtypes to Gs, **299**, 142
- Thrifty genes**  
 for energy metabolism, single nucleotide polymorphisms, evolutionary origins and targeting for intervention in obesity-related diseases, **295**, 207
- Thrombin**  
 airway smooth muscle cell proliferation induced by, attenuation by inhibitors of tyrosine kinase signaling cascade (guinea pig), **293**, 72  
 aptamer binding to, preparation of molecular aptamer beacon for real-time protein recognition using, **292**, 31  
 metabolic responses induced by, in human umbilical vein endothelial cells, **293**, 979  
 platelets activated by, heat shock protein 90 complexes in, **297**, 129  
 Pyk2 phosphorylation in endothelium stimulated by, role of intracellular  $\text{Ca}^{2+}$ , PKC, and Src kinases, **294**, 1001
- Thrombopoietin**  
 induction of P-selectin expression on platelets and subsequent platelet/leukocyte interactions, **292**, 987; brief commentary, **299**, 343  
 upregulation of neutrophil activating peptide-2 gene in megakaryocytes (mouse), **290**, 865
- Thrombospondin-1**  
 70-kDa core region, osteosarcoma cell adhesion to, mediation by  $\alpha$ 4 $\beta$ 1 integrin, **293**, 86  
 effects on IL-6 and IL-10 release by human U937 monocytic cells, **290**, 1551  
 second TSP1 module, structural characterization (human), **296**, 156
- Thromboxane A2**  
 platelet signaling induced by, role of LAT, **292**, 916
- Thromboxane A2 receptor**  
 genetic variant in atopic dermatitis, **292**, 776
- Thylakoid membrane**  
 spontaneous insertion of SecE into, **293**, 747
- Thymidine**  
 effects on Fas-induced apoptosis, **295**, 300
- Thymidine kinase**  
 modulation of 2,2'-difluorodeoxycytidine cytotoxicity, **293**, 1478



- Thymidine phosphorylase  
potential in tumor therapy via inhibition by 2-deoxy-D-ribose, **291**, 806  
suppression of Fas-induced apoptotic signal transduction independent of enzymatic activity, **295**, 300
- Thymidylate synthase  
peptide domains in interface region binding thymidylate synthase mRNA, identification, **297**, 24
- Thymine  
effects on Fas-induced apoptosis, **295**, 300
- Thymocytes  
aryl hydrocarbon receptor expression, role in dioxin-induced adseverin expression (mouse), **291**, 1194
- Thymosin  $\beta$ 4  
upregulation in human umbilical vein endothelial cells by hepatocyte growth factor, **296**, 401
- Thymus  
adseverin expression induced by dioxin, regulation by aryl hydrocarbon receptor (mouse), **291**, 1194  
developmental expression of EphB6, studies with knockout mice, **298**, 87  
expression of murine BTB/POZ zinc finger gene *Znf131*, **296**, 319
- Thyocytes  
dedifferentiated, enhanced expression of plasminogen activator inhibitor-1, **295**, 737
- Thyroglobulin  
porcine, hormonogenic tyrosine 5 of, sulfation status, **298**, 193
- Thyroid  
organotypic tissue culture: maintenance of three-dimensional follicles with C cells for long term, **294**, 906  
paternal imprinting of  $G\alpha_s$  in, role in TSH resistance in pseudohypoparathyroidism type 1a (human), **296**, 67  
stimulation by monoclonal antibody to TSH receptor, **299**, 891
- Thyroid carcinoma  
cell growth and calcitonin secretion, effect of somatostatin receptor subtype 1 (human), **297**, 828  
homeodomain-interacting protein kinase 2 gene expression, **290**, 942
- Thyroid follicles  
three-dimensional, with C cells, long-term maintenance in organotypic culture of thyroid tissue, **294**, 906
- Thyroid hormone receptors  
TR $\alpha$ 1-v-erbA chimeras, homodimerization on inverted repeat IR0, **294**, 35  
transactivation mediated by, suppression by polychlorinated biphenyls, **299**, 384
- Thyroid hormonesynthesis  
associated site of porcine thyroglobulin, sulfation status of tyrosine 5 in, **298**, 193
- Thyroid neoplasia  
homeodomain-interacting protein kinase 2 gene expression (human), **290**, 942
- Thyroxine  
induction of pro-renin converting enzyme mk9 in liver (guinea pig), **293**, 412
- Thyroperoxidase  
folding in one complex B-cell immunodominant region, **295**, 1118
- Thyrotropin  
resistance, in pseudohypoparathyroidism type 1a, role of paternal imprinting of  $G\alpha_s$  in human thyroid, **296**, 67
- Thyrotropin receptor  
monoclonal antibody with stimulating activity, generation, **299**, 891
- Thyroxine  
and T<sub>3</sub>, interaction with 1 $\alpha$ ,25-dihydroxyvitamin D<sub>3</sub> in osteoclast formation, **291**, 987
- Tick-borne encephalitis  
NS3 protease of Langat virus vector, cleavage of serine protease substrates, **294**, 16
- TIE2  
function on hematopoietic stem cells in umbilical cord blood (human), **298**, 731
- TIF2  
coactivation of endogenous progesterone receptor in COS-7 cells, **295**, 469
- Tight junctions  
occludin protein in, gene expression with differential splicing and alternative promoter usage, **298**, 657  
PAR3 $\beta$  localization to, **299**, 641
- Tim44  
mitochondrial, membrane topology, analysis with biotin maleimide, **293**, 321
- TIP-2/GIPC  
PDZ domain-containing, interaction with 5T4 with implications for metastasis, **290**, 1030
- TIR domain  
C713S mutant structure in human TLR2, extensively associated dimer in, **299**, 216
- TIR domain-containing adapter protein  
role in endotoxin-induced NF- $\kappa$ B activation and apoptosis in endothelial cells, **295**, 157
- TIS11  
structure, identification of nuclear import and export signals: zinc finger protein, **293**, 1242
- Tissue culture  
organotypic, thyroid: maintenance of three-dimensional follicles with C cells for long term, **294**, 906
- Tissue engineering  
bone, review, **292**, 1  
sequential cellular de- and redifferentiation in, growth factors for, **294**, 149
- Tissue factor  
antisense oligonucleotide for, inhibition of hepatic ischemia-reperfusion injury, **297**, 433
- Tissue factor pathway inhibitor  
induction of expression of *JUNB* and *GADD45B* mRNAs, **299**, 847  
oxidation products of phospholipid-containing  $\delta$ -9 fatty acids impairing activity of, **298**, 468
- Tissue inhibitor of metalloproteinase 1  
expression  
in osteoclast cultures, regulation by osteoprotegerin, **293**, 38  
in prostate cancer cells, enhancement by staurosporine (human), **295**, 489  
and TIMP-2, activation of Ras through different pathways, **296**, 201
- Tissue inhibitor of metalloproteinase 2  
expression in osteoclast cultures, regulation by osteoprotegerin, **293**, 38  
inhibition of ADAMTS1, **293**, 501  
levels in male and female breast cancer, **292**, 161  
and TIMP-1, activation of Ras through different pathways, **296**, 201
- Tissue inhibitor of metalloproteinase 3  
inhibition of ADAMTS1, **293**, 501
- Tissue morphogenesis  
associated GEX-3, isolation of interacting molecules by novel functional screening, **292**, 697
- Tissue plasminogen activator  
and NCAM, reciprocal actions via Ras-dependent MAPK activation in rat hippocampal neurons, **298**, 262
- Tissues  
distribution in  
 $\alpha/\beta$  hydrolase fold proteins encoded by three murine cDNAs, **292**, 617  
calcyphosin 2 (human), **291**, 414  
cyclin B3 gene (human), **291**, 406  
membrane-associated prostaglandin-E synthase-2 (human), **291**, 884

- neuroglobin (rat), **290**, 1411
- expression in
- full-length cDNA encoding inositol 1,4,5-trisphosphate 3-kinase B (human), **291**, 400
  - homeodomain-interacting protein kinase 2 gene in murine embryo and human and murine adult, **290**, 942
  - SCAN/(Cys)2(His)2 zinc finger transcription factor *ZNF323* in early embryonic development (human), **296**, 206
  - TrkB gene (human), **290**, 1054
  - specific deletion of manganese superoxide dismutase gene, model mice for, **296**, 729
- Titin
- mutations, as molecular basis for dilated cardiomyopathy, **291**, 385
- TMEM9
- localization to lysosomes and late endosomes (human), **297**, 912
- TOAD-64
- identification as CaM kinase II substrate in postsynaptic density, **290**, 948
- Tobacco etch virus
- protease, P1' specificity, **294**, 949
- Tobramycin
- induction of pH-sensitive activation of calcium-sensing receptor, **297**, 71
- $\alpha$ -Tocopherol
- analog  $\alpha$ -tocopheryl succinate, biological activity, shift due to pro-vitamin-to-vitamin conversion, **293**, 1309
  - plasma and LDL-apo B, effect of smoking, **292**, 175
  - sparing by thioredoxin reductase in biomembranes, and lipid hydroperoxide reduction, **292**, 45
- Tocopherols
- mixed tocopherol preparation vs tocopherol alone, effects against hypoxia-reoxygenation injury in myocytes, **291**, 349
- $\alpha$ -Tocopheryl succinate
- biological activity, shift due to pro-vitamin-to-vitamin conversion, **293**, 1309
- Toll/interleukin-1 receptor domain
- C713S mutant structure in human TLR2, extensively associated dimer in, **299**, 216
- Toll/interleukin-1 receptor domain-containing adapter protein
- role in endotoxin-induced NF- $\kappa$ B activation and apoptosis in endothelial cells, **295**, 157
- Toll-like receptor 2
- TIR domain, C713S mutant structure, extensively associated dimer in, **299**, 216
- Toll-like receptor 3
- monoclonal antibody against, block of double-stranded RNA-mediated signaling, **293**, 1364
- Toll-receptor accessory proteins
- MD-2, lipopolysaccharide-binding peptide fragment of, identification, **292**, 880
- TOL plasmid
- Pseudomonas*, integration host factor-induced DNA bending structure in promoter regulatory region, AFM, **291**, 361
- TonEBP/NFAT5
- phosphorylation and DNA binding, role of dimerization, **294**, 968
- Toothless
- osteopetrosis in *tl* rat, role of mutation in *Csfl*, **294**, 1114
- Topoisomerase I
- and ATP, activation of cDNA synthesis of HIV-1, **294**, 509
  - binding to and dissociation from hairpin-loop RNAs, implications for regulation of HIV-1 replication (human), **297**, 593
- Topoisomerase III
- complex with Sgs1, formation of supercomplex with Mlh1–Mlh3 in meiotic yeast cells, **296**, 949
- Toxicity
- menadione in *Xanthomonas campestris* pv. *phaseoli*, transaldolase protective effects, **297**, 968
- TPA, see Phorbol myristate acetate
- TPA-responsive element
- role in constitutive expression of mouse *Cyp1a2* gene, **297**, 1297
- t-Plasminogen activator
- and NCAM, reciprocal actions via Ras-dependent MAPK activation in rat hippocampal neurons, **298**, 262
- TPO1* gene
- Pdr1p-mediated transactivation, role in yeast resistance to chlorinated phenoxyacetic acid herbicides, **292**, 530
- Trabecular network
- protective role of optineurin (human), **298**, 67
- Trachea
- anti-inflammatory activity and bronchodilator effect of NO-steroids (guinea pig), **290**, 125
- TRAF2 binding protein
- identification and functions in activation of NF- $\kappa$ B and AP-1, **290**, 1108
- Trafficking
- cell surface, of Fas in NIT-1 cells, and surface and total Fas expression, **290**, 443
  - group I metabotropic glutamate receptor in HEK293T cells, Homer1 isoform controlling, N-terminal sequence specific for, **296**, 523
  - intercellular, herpes simplex virus type 2 UL14 deletion mutant proteins, **298**, 357
  - intracellular, exogenous DNA delivered by cationic liposomes, visualization, **298**, 591
  - membrane
    - regulation by myotubularin family members hMTM1, hMTMR2, and hMTMR3, **291**, 305
    - from *trans*-Golgi network, effects of dominant-negative mutant of BIG2, **294**, 254
- TRAIL
- apoptosis induced by
    - IFN- $\gamma$  enhancement of, role of inhibition of TRAIL-induced IAP-2 upregulation, **291**, 233
    - inhibition in BJAB cells by Epstein–Barr virus BHRF1, **297**, 682
    - inhibition by hypoxia, **291**, 150
    - relationship to DAP3 (Jurkat cells), **297**, 880  - apoptosis induction
    - EGF receptor inhibitor-enhanced, implications of Akt regulation by EGF-R inhibitors, **295**, 515
    - in human articular chondrocytes in vitro, **296**, 671
- trans*-acting factors
- liver-specific, binding to 64-bp element and activation of apo(a) gene, **292**, 243; *erratum*, **294**, 1193
- Transaldolase
- protective effects against menadione toxicity (*Xanthomonas campestris* pv. *phaseoli*), **297**, 968
- Transamidation
- catalysis by transglutaminase 2, GTP requirement for, **294**, 818
- Transcription
- activation by basic helix–loop–helix domain of E47 transcription factor, role of other protein regions, **290**, 1521
  - human genes, regulation by human orthologs of *Drosophila* heterochromatin protein 1, **293**, 1217
  - in primary cerebellar neurons, repression by PQBP-1, **294**, 268
  - rDNA during oogenesis (*Xenopus laevis*), **290**, 1151
- Transcriptional enhancer factor-1
- interaction with myocyte enhancer factor-2, regulation of muscle-specific promoters, **294**, 791
- Transcriptional regulation
- unified model: *FMRI* silencing and signals to chromatin, **295**, 575



- Transcriptional repression  
implications of role of O-glycosylation of RFP in interaction with Enhancer of Polycomb 1, **290**, 409  
in monocytic cells: mutual antagonistic effects of NF-IL6 and HSF1 on transcription, **291**, 1071
- Transcriptional repressor  
ATF3, transcriptional activation by p53, **297**, 1302
- Transcription coactivator  
CBP, direct DNA binding and stimulation of transcription factor DNA binding through small domains, **296**, 118
- Transcription enhancer factor-1  
family members, regulation of activity of mouse mammary tumor virus LTR, **296**, 1279
- Transcription factor A  
mitochondrial, preferential binding to oxidatively damaged DNA (human), **295**, 945
- Transcription factor decoy  
against estrogen receptor  $\alpha$  gene, osteoblastic differentiation induced by, **292**, 761
- Transcription factors  
association of human RAD52 protein with, **297**, 1191  
capture and screening by SELDI mass spectrometry, **290**, 1328  
DNA binding through small domains, stimulation by DNA binding by CBP, **296**, 118  
function of zinc-fingers and homeoboxes 1 as, **297**, 368  
general, physical association with APIS complex, **296**, 991
- Transdifferentiation  
hepatic stellate cells, TGF- $\beta$  isoform mRNA expression during, quantitative monitoring, **295**, 330; *erratum*, **296**, 1035  
pancreatic islet cells into hepatocytes and exocrine cells, induction by transgenic expression of FGF8 and FGF10, **292**, 138
- Transduction  
TAT fusion proteins into osteoclasts and osteoblasts, **299**, 505
- Transfection  
liver- and lobe-selective, after instillation of plasmid DNA to liver surface (mouse), **294**, 46
- Transferrin  
expression in liver epithelial cells cocultured with hepatic stellate cells, **293**, 1420  
hen, apo- and halo-forms, purification and X-ray studies, **295**, 125  
human serum, binding patterns of V(III), V(IV), and V(V) to, HPLC/high-resolution ICP-MS, **296**, 1207  
insect, Konrad Bloch special issue, **292**, 1191
- Transferrin receptor  
membrane topography in colon carcinoma cells after IFN- $\gamma$  treatment, **290**, 635
- Transfer RNA  
cognate tRNA recognition, role of leucyl-tRNA synthetase  $\beta$  subunit (*Aquifex aeolicus*), **297**, 950  
native, catalysis of Diels–Alder reaction, **294**, 145  
tRNA<sub>AGA/AGG</sub>, effect on efficiency of  $\text{HU} \text{IFN}\alpha 2$ ,  $\text{HU} \text{IFN}\alpha 8$ , and HCV core protein expression in *E. coli*, **296**, 1303
- Transformation  
malignant: regulation of transformed state by calpastatin via PKC $\epsilon$  in NIH3T3 fibroblasts, **290**, 510  
tumoral, possible role of EGF-like homeotic protein dlk, **291**, 193
- Transformed cells  
TEL-induced aggregation, and induced tube formation in NIH3T3–UCLA cells, **291**, 820
- Transforming growth factor  $\alpha$   
gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482  
related protein gurken, direct binding to *Drosophila* EGF-receptor homolog Egfr, **291**, 731  
role in mitogenic effect of hepatocyte growth factor, **290**, 197  
tumor growth driven by, inhibition by EGF receptor-specific tyrosine kinase inhibitor, **290**, 349
- Transforming growth factor  $\beta$   
in aging prostate, analysis (rat), **294**, 464  
 $\beta$ -amyloid precursor protein gene transcription induced by, role of CTCF-complex–Smad interaction, **295**, 713  
autocrine and paracrine regulation of lymphocyte CB2 receptor expression, **290**, 91  
binding to Alk8 in presence of TGF- $\beta$ RII, **293**, 1556  
effects on  $\beta$ -amyloid precursor protein gene transcription in normal human astrocytes, **295**, 702  
gene and protein expression in prostate dorsal and ventral lobes, effects of aging (rat), **292**, 482  
induction of fibronectin in murine mesangial cells, mediation by Smad3, **296**, 1356  
inhibition of hepatocellular carcinoma cell growth, attenuation by cyclin D1 overexpression, **292**, 383  
mRNA expression pattern during transdifferentiation of hepatic stellate cells, quantitative monitoring, **295**, 330; *erratum*, **296**, 1035  
regulation of PAI-1, restoration in Smad3-restituted human choriocarcinoma cells, **294**, 1079  
signaling, negative feedback loop of, regulation of Smad3 expression in bleomycin-induced pulmonary fibrosis, **294**, 319  
type I collagen formation, effect of leptin (LX-1 cells), **297**, 906
- Transforming growth factor  $\beta$  receptor  
in aging prostate, analysis (rat), **294**, 464  
peptides binding to, effect on smooth muscle cells, **293**, 1279  
type II, Alk8 binding to TGF- $\beta$  in presence of, **293**, 1556
- Transforming growth factor  $\beta$ 1  
binding to human osteoblasts, augmentation by  $1\alpha,25$ -dihydroxy-vitamin D<sub>3</sub>, **290**, 1558  
effect on monocyte chemoattractant protein 1 expression in Peyronie's disease, **295**, 1014  
effect on peroxisome proliferator-activated receptor  $\gamma$ 1 and  $\gamma$ 2 expression (THP-1 monocytes), **297**, 794  
and HGF, coordinate facilitation of collagen turnover in subepithelial mesenchyme, **297**, 255  
and IL-2, induction in naive CD4<sup>+</sup> T cells, distinct thresholds controlling, **299**, 148  
modulation of matrix metalloproteinase-9 production via Ras/MAPK signaling pathway in transformed keratinocytes, **296**, 267  
role in thrombospondin-1 regulation of IL-10 release by macrophages, **290**, 1551  
for use in sequential cellular de- and redifferentiation in tissue engineering, **294**, 149
- Transforming growth factor  $\beta$ 2  
mediation of inhibition of calcium influx in cholinergic basal forebrain neurons, **290**, 1321
- Transgenes  
integrated, as source of long-term expression after infection by AdLTR-luc, **291**, 34
- Transgenic mouse  
Flp recombinase transgenic C57BL/6 strain for conditional gene targeting, **293**, 953  
reporter gene expression, effect of rabbit  $\alpha$ s1-casein gene distal enhancer, **290**, 53
- Transglutaminase  
catalysis of histone crosslinking, **293**, 1453
- Transglutaminase 2  
mice with deficiency of, osmotic resistance of high-density erythrocytes in, **291**, 1123  
modulation of intracellular Ca<sup>2+</sup>, **293**, 383  
stabilization and transamidation activity, GTP requirement for, **294**, 818
- Transglycosylation  
reaction, reconstruction of glycosaminoglycan chains in decorin under conditions of, **297**, 1167



- by testicular hyaluronidase, in synthesis of carriers for attachment of glycosaminoglycan chains to peptide, **293**, 220
- trans*-Golgi network
- membrane trafficking from, effects of dominant-negative mutant of BIG2, **294**, 254
- Transient receptor potential 5
- expressed in *Xenopus laevis* oocytes, coupling to prostaglandin E receptor EP<sub>1</sub>, **298**, 398
- Transition state
- or substrate, characteristic binding by subsites of trypsin active site, **290**, 494
- Transketolase
- origin of absorption band induced through interaction between apotransketolase and thiamin diphosphate, **294**, 155
- Translation
- cap-dependent, regulation in neuronal cells by IGF-1, **291**, 560
- Translational fusion
- generation of thermostable monomeric luciferases from *Photorhabdus luminescens* using, **296**, 1072
- Translation initiation
- 30S and 70S ribosome complexes, on leaderless mRNA, inhibition by kasugamycin, **297**, 1021
  - directed by internal ribosomal entry site, enhancement by continuous heat shock, **297**, 224
  - non-AUG, mRNA encoding plastid-targeted phage-type RNA polymerase in *Nicotiana glauca*, **299**, 57
  - regulators of, hypophosphorylation in rat liver during ethionine-mediated ATP depletion, **298**, 235
- Translocation
- Ca<sup>2+</sup>/calmodulin-dependent protein kinase II after acute myocardial ischemia (rat), **297**, 997
  - Na<sup>+</sup>,K<sup>+</sup>-ATPase in renal epithelial cells, induction by Rho small GTPase, **297**, 1231
  - nuclear, *see* Nuclear translocation
- Transmembrane protein 9
- localization to lysosomes and late endosomes (human), **297**, 912
- Transmembrane segments
- autonomous and heteronomous positioning in multispanning membrane protein, **296**, 1
  - glucose-6-phosphatase amino-terminal, membrane topogenesis on endoplasmic reticulum, **292**, 153
- Transmembrane transport
- P-glycoprotein-mediated, elevation by catechin in green tea, **297**, 412
- Transplantation
- fat tissues, cell survival and gene expression after, effects of nutrition (mouse), **295**, 630
  - human cord blood somatic stem cells into SCID mouse liver,  $\beta_2$ -microglobulin downregulation after, **294**, 1052
- Transthyretin
- amyloidogenic intermediates, induction of apoptosis, **294**, 309
- TRAP220
- role in transactivation through ER $\alpha$  and ER $\beta$  with ferutinine, **291**, 354
- TRE
- role in constitutive expression of mouse *Cypla2* gene, **297**, 1297
- Trecadrine
- effects on glucose uptake and leptin expression and secretion in cultured adipocytes from lean and overweight rats, **291**, 1201
- Trefoil factor 2
- promoter, autoinduction of, upstream *cis*-acting element requirement for, **293**, 366
- Trehalose
- lowering of oxygenase activity of Rubisco, **298**, 247
- TREK-1
- voltage-dependent gating, molecular basis, **292**, 339
- Triazolopyrimidines
- tobacco acetolactate synthase resistance to, role of lysine residues 219 and 255, **293**, 433
- Tributyltin
- effect on mitochondrial membrane potential in human leukemic cells resistant to  $\beta$ -D-arabinofuranosylguanosine, **298**, 338
  - induction of cytochrome *c* release from isolated mitochondria, mechanisms, **292**, 904
- Tricarboxylate carrier
- mitochondrial, BBG-TCC, identification and characterization, **295**, 463
- Trichoderma reesei*
- activity of purified recombinant sugarcane cystatin against, **296**, 1194
- Trichosanthin
- amino acid residues crucial for IgE response, identification, **297**, 510
- Trichosporon beigeli*
- antifungal mechanism of SMAP-29 (1–18) isolated from sheep myeloid mRNA, **295**, 591
- Trichostatin A
- activation of IGFBP-3 promoter by upregulation of Sp1 in hepatoma cells, **296**, 1005
  - histone deacetylase inhibition by, effects on macrophage CD9 expression, **294**, 660
  - inhibition of gelatinase A expression, **298**, 110
- Trifluoromethionine
- inhibition of malodorous bacterial growth, L-methionine- $\gamma$ -lyase as target in, **292**, 964
- Triglycerides
- serum levels
    - effects of adenoviral overexpression of apolipoprotein A-V (mouse), **295**, 1156
    - in ob/ob and db/db mice, effects of acute and chronic treatment with AICAR, **294**, 798
  - synthesis
    - acyl-coenzyme A:diacylglycerol acyltransferase activities for, concerted elevation by glucose and insulin, **298**, 317
    - genes related to, upregulation in skeletal muscle after exercise training, **296**, 395
- Triiodothyronine
- activity, disruption by tetrabromobisphenol A and tetrachlorobisphenol A, **293**, 554
  - effect on adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084
  - regulation of *pdx1* gene promoter in pancreatic beta cells, **299**, 277
  - and T<sub>4</sub>, interaction with 1 $\alpha$ ,25-dihydroxyvitamin D<sub>3</sub> in osteoclast formation, **291**, 987
  - transactivation induced by, suppression by polychlorinated biphenyls, **299**, 384
- Triosephosphate isomerase
- from *Trypanosoma cruzi*, inactivation by benzothiazoles, **295**, 958
- Tripartite efflux systems
- Pseudomonas aeruginosa*, substrate specificity, determination by RND component, **299**, 247
- Tripeptidyl-peptidase II
- expression and activity increase in skeletal muscle during sepsis, **296**, 41
- Trisaccharide
- structurally related to repeating unit of pullulan, enzymatic synthesis and characterization, **297**, 382
- Trisamine
- phosphorothioate antisense DNA modified by, selective binding to mRNA, effect on antisense activity and toxicity, **293**, 1341
- Tris(1,10-phenanthroline) cobalt(III)
- complex with DNA, structural transition in ethanol–water solution, **299**, 910

- Tritrpticin**  
cathelicidin-derived antimicrobial, conformation-dependent antibiotic activity, **296**, 1044
- Trk1p**  
role in ion homeostasis in *Saccharomyces cerevisiae*, **295**, 1142
- Trk2p**  
role in ion homeostasis in *Saccharomyces cerevisiae*, **295**, 1142
- TrkA**  
constitutive activity in TrkA receptor-overexpressing PC12 clones, **291**, 972  
role in tyrosine phosphorylation and processing of  $\beta$ -APP, **295**, 324
- TrkB**  
binding sites for BDNF and NT-4, localization to discrete receptor domain, **291**, 501  
gene, genomic organization: novel TrkB isoforms, unusual gene length, and splicing mechanism (human), **290**, 1054  
interaction with Nck2 adaptor protein, promotion by brain-derived neurotrophic factor, **294**, 1087
- Troglitazone**  
effect on stearoyl-CoA desaturase, **297**, 1259
- Trolox**  
effects on glycated albumin cytotoxicity to retinal pericytes (bovine), **292**, 1010
- Trophoblast**  
differentiation, association with DNA methylation and demethylation, **290**, 701
- $\alpha$ -Tropomyosin**  
gene mutations in dilated cardiomyopathy, **298**, 116  
wild type and Met9Arg mutant causing nemaline myopathy, generation with baculovirus system, **296**, 300
- Troponin T**  
gene mutations in dilated cardiomyopathy, **298**, 116
- Trypanosoma brucei*  
RNA-binding proteins p34 and p37 from, association with 5S rRNA, **290**, 569
- Trypanosoma cruzi*  
adhesion to cardiac myoblasts, role of 45-kDa mucin, **290**, 29  
aromatic  $\alpha$ -hydroxy acid dehydrogenase, specificity of, analysis by site-directed mutagenesis, **293**, 633  
invasion of nonphagocytic cells, regulation by endocytically active dynamin, Rab5, and Rab7, **291**, 516  
lipid kinases and  $\text{Ca}^{2+}$  signaling, stimulation by synthetic peptide carrying residues 1–40 of chicken  $\alpha^D$ -globin, **293**, 314  
triosephosphate isomerase, inactivation by benzothiazoles, **295**, 958
- Trypsin**  
active site, subsites of, favoring of catalysis or substrate binding, **290**, 494  
selectivity for, of Kunitz trypsin inhibitor with one disulfide bridge purified from *Swartzia pickellii*, **291**, 635
- Trypsin inhibitors**  
SFTI-1 isolated from sunflower seeds, and analogues, chemical synthesis and kinetic study, **292**, 855
- Tryptophan-2,3-dioxygenase**  
expression in bone marrow-derived hepatocytes, culture conditions enhancing, **298**, 24
- Tryptophan hydroxylase**  
Phe313, role in determination of substrate specificity, **292**, 639
- TSA**  
effects on interleukin-18 gene expression in myeloid cells, **292**, 937
- TSC-22**  
cytoplasmic, enhancement of radiation sensitivity of salivary gland cancer cells, **292**, 957
- TSC-36**  
enhanced expression in p130<sup>Cas</sup>-deficient fibroblasts, **294**, 635
- Tschimganidine**  
derived from Umbelliferae, agonist/antagonist activities for estrogen receptors  $\alpha$  and  $\beta$ , **291**, 354
- Tschimgine**  
derived from Umbelliferae, agonist/antagonist activities for estrogen receptors  $\alpha$  and  $\beta$ , **291**, 354
- Tsk toxin**  
and maurotoxin, reticulated chimeric peptide derived from, synthesis, 3D structure, and pharmacology (scorpion), **291**, 640
- TSP1 module**  
second, of human thrombospondin 1, structural characterization, **296**, 156
- TspRI restriction enzyme**  
in isolation of single-stranded DNA, **290**, 1195
- TT virus**  
distribution in leukocyte subpopulations, **290**, 242
- Tube formation**  
FGF-2-mediated, by brain capillary endothelial cells, role of c-Fyn (mouse), **290**, 1354  
induction by TEL in NIH3T3-UCLA cells, **291**, 820
- Tuberomammillary nucleus**  
histaminergic neurons in, activation by orexins via orexin 2 receptor, **290**, 1237
- Tubular epithelial cells**  
and tubulointerstitial fibroblasts, and TGF- $\beta$ 1 and HGF roles in epithelial–mesenchymal interactions, **297**, 255
- Tubulin**  
neuronal, STOP interaction, role of polyglutamylation (mouse brain), **297**, 787  
tyrosinated  $\alpha$ ,  $\beta_{III}$ , and  $\beta_{IV}$  isotypes, levels in paclitaxel-resistant MCF-7 breast cancer cells, **293**, 598
- $\alpha$ -Tubulin**  
degradation signaled by NO-mediated tyrosine nitration, induction by NMDA receptor stimulation in cuttlefish nervous system, **293**, 1536  
expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- $\beta$ -Tubulin-like protein**  
cDNA, expressed specifically in elongating cotton fibers, induction of longitudinal growth of fission yeast, **296**, 1245
- Tumoral transformation**  
malignant: regulation of transformed state by calpastatin via PKC $\epsilon$  in NIH3T3 fibroblasts, **290**, 510  
possible role of EGF-like homeotic protein dlk, **291**, 193
- Tumor antigens**  
in prostate cancer cell line, serological cloning, **290**, 830
- Tumor cells**  
human tumor-derived cell lines, choline kinase overexpression, **296**, 580  
superantigen-induced apoptosis, mediation by cytotoxic lymphocytes, cytokines, and nitric oxide, **290**, 1336
- Tumor growth**  
breast cancer 4T1 cells in vitro and in vivo, effects of resveratrol, **291**, 1001  
HPV-associated tumors, inhibition by interleukin-2, **299**, 818  
inhibition in vivo by dipalmitoyl peptide binding to SH3 domain, **296**, 434  
reduction by blockade of angiotensin receptor AT1a signaling, **294**, 441  
stimulation by G-CSF, role of bone marrow-derived endothelial progenitor cells (mouse), **297**, 1058
- Tumorigenesis**  
effect of transcriptional activation of p21<sup>Cip1</sup> by Drm/Gremlin, **295**, 1135  
possible role of NIRF protein involved in cell cycle regulation, **296**, 530
- Tumor immunity**  
histamine H<sub>2</sub> receptor-mediated modulation of local cytokine expression in experimental tumor model, **297**, 1205



- Tumor-like growth  
genes causing, overexpression in rheumatoid synovial fibroblasts, **294**, 1121
- Tumor necrosis factor  
apoptosis induced by, fibroblast sensitization to, roles of DNA fragmentation factor and poly(ADP-ribose) polymerase-1, **290**, 796; *erratum*, **291**, 191  
necrosis-like cell death induced by, p21<sup>WAF1/Cip1</sup> upregulation prior to, **294**, 672  
stimulation by, noninvolvement in T2BP activation of NF- $\kappa$ B and AP-1, **290**, 1108
- Tumor necrosis factor  $\alpha$   
acetaldehyde-induced generation in Kupffer cells of ethanol-fed rats, reduction by dilinoleoylphosphatidylcholine, **299**, 459  
apoptosis induced by, in mouse epidermal JB6-derived RT-101 cells, molecular mechanism, **295**, 24  
apoptosis induction in granulosa cells, and attenuation by glucocorticoids, role of modulation of Bcl-2, **294**, 51  
apoptosis mediated by, in chondrocytes sensitized by MG132 or actinomycin D, **295**, 937  
cytotoxicity for vascular endothelial cells, role of nitric oxide, **291**, 780  
effect on  
adiponectin gene expression in 3T3-L1 adipocytes, **290**, 1084  
apolipoprotein M expression in HepG2 cells, **292**, 944  
expression of optineurin gene, **298**, 67  
expression in macrophages, suppression by 4-nonylphenol, **294**, 753  
ICAM-1 expression induced by, inhibition in sinusoidal endothelial cells by double-stranded decoy DNA oligomer for NF- $\kappa$ B, **298**, 10  
induction of MMP-9 expression in C6 glioma cells, inhibition by PDGF via PI 3-kinase-dependent pathway, **296**, 864  
interleukin-8 release in A549 cells treated with, effect of antioxidant cocktail EM-X, **296**, 1148  
LPS-induced generation in Kupffer cells of ethanol-fed rats, decrease by dilinoleoylphosphatidylcholine, roles of MAPKs and NF- $\kappa$ B, **294**, 849  
mediation of superantigen-induced tumor cell apoptosis, **290**, 1336  
NF- $\kappa$ B-mediated induction of adhesion molecules in endothelial cells, regulation by atrial natriuretic peptide, **295**, 1068  
production in whole blood cultures from healthy individuals, **292**, 538  
regulation of *pdx1* gene promoter in pancreatic beta cells, **299**, 277  
release by alveolar epithelial cells, redox regulation of, **296**, 847  
role in enhancement by dexamethasone of LPS-induced neutrophil accumulation in mouse lung, **294**, 1101  
secretion by macrophages, CpG motif-independent induction by plasmid-cationic liposome complex, **293**, 344  
serum levels, effects of pioglitazone, **291**, 55  
stimulation of osteoprotegerin secretion from prostate cancer cells, **293**, 451
- Tumor necrosis factor receptor 1  
knockout mice, mortality and course of anthrax infection in, **292**, 41
- Tumor necrosis factor receptor-associated protein  
identification as CaM kinase II substrate in postsynaptic density, **290**, 948
- Tumor necrosis factor-related apoptosis-inducing ligand, *see* TRAIL
- Tumors  
growth, angiogenesis, and metastasis, reduction by blockade of angiotensin receptor AT1a signaling, **294**, 441
- Tumor suppressor gene  
PTEN, promoter analysis, **292**, 422
- Tumor suppressor protein  
*Drosophila* Disks Large, mammalian homolog, binding to ribosome receptor, **294**, 1151
- Tumor suppressors  
class II, murine H-rev107 gene encoding, gene organization and Sp1/Sp3-binding GC-box required for transcription, **293**, 793
- Tungsten  
and molybdenum: comparison of biologic properties, **292**, 293
- Turpentine  
effect on hepatic mRNA profiles, **290**, 518
- TVB  
expression in hen ovarian follicles: DR5-like death receptor, **291**, 226
- TWEAK  
interaction with Fn14, proinflammatory effect on human umbilical vein endothelial cells, **299**, 488
- TWIST  
inactivation, effects on CBFA1/RUNX2 expression and DNA binding to osteocalcin promoter in osteoblasts, **297**, 641
- Two-hybrid cloning  
yeast oxysterol-binding protein homolog *OSH3*, **293**, 733
- Two-photon excitation microscopy  
photobleaching of green fluorescent protein inside live cells, **291**, 1272
- Tyrosinase  
drugs inhibiting, endoplasmic reticulum-targeted delivery to melanoma cells by pH-sensitive liposomes, **293**, 918
- Tyrosination  
tubulin  $\alpha$ ,  $\beta_{III}$ , and  $\beta_{IV}$  isotypes in paclitaxel-resistant breast cancer MCF-7 cells, **293**, 598
- Tyrosine  
fluorescence emission dominated by, from spinach photosystem II-derived 33-kDa protein, **293**, 593  
hormonogenic tyrosine 5 of porcine thyroglobulin, sulfation status, **298**, 193  
Tyr75 orientation in active site of aspartic proteinase of *Saccharomyces cerevisiae*, **295**, 1020
- Tyrosine aminotransferase  
expression in bone marrow-derived hepatocytes, culture conditions enhancing, **298**, 24
- Tyrosine hydroxylase  
detection in autonomic neurons supplying fat depots (pig), **293**, 1138  
Trp372 substitution with Phe, in analysis of tryptophan hydroxylase  
Phe313 role in substrate specificity, **292**, 639
- Tyrosine kinase, *see* Protein-tyrosine kinase
- Tyrosine nitration  
NO-mediated, related  $\alpha$ -tubulin degradation, induction by NMDA receptor stimulation in cuttlefish nervous system, **293**, 1536  
PECAM-1 ITIM, abrogation of phosphorylation and SHP-2 binding, **296**, 1171
- Tyrosine phosphorylation  
 $\beta$ -amyloid precursor protein, role of nerve growth factor TrkA, **295**, 324  
Arg, role in homologous recombinatorial DNA repair, **299**, 697  
Bruton's tyrosine kinase by c-Abl, **299**, 510  
caveolin 1, induction by IGF-I, **295**, 1085  
CD3- $\epsilon$ -ITAM N- and C-terminal tyrosines, differential regulation in T cells, **291**, 574  
clathrin heavy chain under oxidative stress, **297**, 353  
IRS-1 in adipocytes, regulation by proteasome inhibitors, **296**, 1257  
maspin in normal mammary epithelia and breast cancer cells, **295**, 800  
phospholipase C- $\gamma$ 1, stimulation by prostaglandin F<sub>2 $\alpha$</sub> , **297**, 1102  
thrombin-stimulated, of Pyk2 in human endothelium, independence from Src binding, **294**, 1001
- Tyrosylprotein sulfotransferase  
isoform shift in endothelial cells, mediation by shear stress, **294**, 541; *erratum*, **295**, 1033



## Tyrphostin 47

- attenuation of thrombin-induced airway smooth muscle cell proliferation (guinea pig), **293**, 72

## U

## U937 cells

- genes elicited by ultrasound, DNA microarray analysis, **290**, 498
- growth suppression by *N*-coumaroyltyramine via protein-tyrosine kinase inhibition, **292**, 1104
- hypocrellin-A and -B photodynamic therapy, effects on release of angiogenesis regulators, **298**, 520
- IL-6 and IL-10 release, effects of thrombospondin-1, **290**, 1551

## UBE2I

- interaction with SALL1, **296**, 870

## Ubiquinol

- inhibition of  $Mg^{2+}$ -dependent neutral sphingomyelinase in liver plasma membrane, role of isoprenoid chain, **297**, 581

## Ubiquinone

- biosynthesis in liver peroxisomes (rat), **291**, 1128

## Ubiquitin

- association with nuclear aggregates formed by expression of expanded polyglutamine, **294**, 429
- c-Raf-1 degradation by proteasome dependent on, protection by cell adhesion, **294**, 976
- proteasome pathway dependent on, role in suppression of STAT1 activity in hepatocytes, **299**, 574
- proteolysis dependent on, cooperative roles of ubiquitin-like proteins and Rpn10, **293**, 986
- role in degradation of ornithine decarboxylase in *Saccharomyces cerevisiae*, **293**, 139

## Ubiquitination

- cyclin D1, reduction in UVB-induced murine squamous cell carcinomas, **298**, 377
- p21, regulatory region required for, **293**, 120
- Ro52 autoantigen, **295**, 774

## Ubiquitin-interacting motif

- from Hrs, monoubiquitin interaction with, **296**, 1222

## Ubiquitin ligase

- with engineered double RING finger domain, targeted substrate degradation by, **295**, 370

## Ubiquitin-like proteins

- 26S proteasome subunits binding to, identification, **296**, 813
- and Rpn10, cooperative roles in ubiquitin-dependent proteolysis, **293**, 986

## Ubiquitin–proteasome pathway

- inhibition, induction of differential heat shock protein response in cardiomyocytes, **291**, 542

## Ubiquitin–protein ligase

- UBE3A, HECT domain, interaction of VCY2 protein with, **296**, 1104

## UDP-glucuronosyltransferase

- activity toward bilirubin, induction in primary rat hepatocyte culture, **291**, 29

- UGT1A1 gene promoter, defect in, identification and association with hyperbilirubinemia, **292**, 492

## UL14

- herpes simplex virus type 2, deletion mutant proteins, intercellular trafficking, **298**, 357

## Ulcerative colitis

- quantitative analysis of human glucocorticoid receptor  $\alpha/\beta$  mRNA in, **296**, 1286

## Ultrasound

- genes elicited in U937 cells by, DNA microarray analyses, **290**, 498
- in vitro transfer of antisense oligodeoxynucleotides into coronary endothelial cells by, **298**, 587

## Ultraviolet radiation

- oxidation of pterins in vitiligo: production of  $H_2O_2$  and pterin-6-carboxylic acid, **292**, 805

- photobiotin under, activation of polymer shielding Ag-coated quartz crystal microbalance for covalent immobilization of DNA, **290**, 962

- protective effects of  $\alpha$ A-crystallin and  $\alpha$ B-crystallin against, **295**, 854

- skin aging induced by, D- $\beta$ -aspartic acid-containing peptides in elastic fibers as marker for, **294**, 1047

- UVA, 2-methyl-1,4-naphthoquinone-sensitized, adenine products from, **291**, 1252

## UVB

- enhancement of IL-18 production in human keratinocytes, role of ROI and AP-1 signaling, **298**, 289

- phototoxicity, cellular defense against, by cytosolic NADP<sup>+</sup>-dependent isocitrate dehydrogenase, **292**, 542

- squamous cell carcinomas induced by, associated reduction of cyclin D1 ubiquitination (mouse), **298**, 377

## UMP kinase

- Escherichia coli*, comparative modeling and immunochemical reactivity, **294**, 173

## UNC5H2

- modulation of  $G_{i2}$  signaling, **297**, 898

## Uncoupling proteins

- expression in adipose tissues, liver, and muscle, alterations in 5-HT<sub>2C</sub> receptor mutant mice, **295**, 249

- role in pathophysiological states, review, **293**, 1145

- UCP3, gene expression independent of genes for lipid transport and oxidation in skeletal muscle, activation by fasting, **294**, 301

## Unfolded protein

- complex between FtsH and, stabilization by binding of ATP and blocking of protease, **296**, 8

## Unfolded protein response

- disturbance by familial Alzheimer's disease-linked presenilin-1 mutants, **296**, 313

- genetic link with vesicle formation from endoplasmic reticulum, **296**, 568

- and vesicle budding from endoplasmic reticulum, intimate relationship between, **296**, 560

Unfolding, *see* Protein unfolding

## Uniaxial cyclic strain

- activation of G proteins in human endothelial cells, **299**, 258

## Unsaturated fatty acids

- Konrad Bloch special issue

- all-*cis*-4,7,10,13–16:4, *Euglena* mystery, **292**, 1239

- and cell regulation of lipid polymorphism, **292**, 1201

 $\delta$ -9 Unsaturated fatty acids

- phospholipid-containing, oxidation products impairing activity of tissue factor pathway inhibitor, **298**, 468

## Unwinding

- DNA chain, activity of lipocortin I heterotetramer, regulation by,  $Ca^{2+}$  and  $Mg^{2+}$ , **291**, 205

## u-Plasminogen activator

- activation, effect of cyclooxygenase-2 overexpression in tumor cells, **299**, 886

- expression, inhibition by *Ganoderma lucidum* in highly invasive breast and prostate cancer cells, **298**, 603

- induction by calcitonin in LLC-PK1 cells, role of Erk1/2 phosphorylation, **290**, 1483

- inhibition by homocysteine, **293**, 497

- interleukin-2-mediated upregulation in natural killer cells, **292**, 184

- and MMP-2, expression in SV40 large T-antigen-immortalized cells, relationship to calpain, **297**, 294

- upregulated secretion via AP-1 and NF- $\kappa$ B activation, PKC $\delta$  induction of motility of breast cancers by, **290**, 552

- Plasminogen activator receptor  
 expression, inhibition by *Ganoderma lucidum* in highly invasive breast and prostate cancer cells, **298**, 603  
 interleukin-2-mediated upregulation in natural killer cells, **292**, 184  
 upstream stimulatory factor  
 role in HGF gene regulation mediated by multiconsensus region, **296**, 374
- Trb* gene  
 upregulated in bombesin receptor subtype-3-deficient mouse, cloning, expression, and mapping, **290**, 1282
- Urea  
 interaction with Cdc42, in analysis of GDP binding states, **291**, 1276  
 Urea stabilization  
 molten globule state of papain, **290**, 1441  
 Urea transporter  
 effects of mineralocorticoid deficiency (rat), **299**, 285
- Urinary bladder  
 urothelium, expression of porcine uroplakin II gene, **293**, 862; *erratum*, **295**, 1032
- Urine  
 bilirubin metabolites, effects of psychological stress (human), **293**, 517  
 retinol binding protein, and plasma RBP, comparative phenotypic analysis using MS immunoassay (human), **297**, 401
- Urocortin  
 CRF<sub>1</sub> receptor desensitization induced by, GRK3 regulation during, **298**, 303
- Urokinase, *see* u-Plasminogen activator  
 Urokinase plasminogen activator, *see* u-Plasminogen activator  
 Uroplakin II gene  
 porcine, cloning, sequencing, and expression analysis, **293**, 862; *erratum*, **295**, 1032
- Urothelium  
 expression of porcine uroplakin II gene, **293**, 862; *erratum*, **295**, 1032
- Uterine endometrial cells  
 cell adhesion proteins in, effects of benzo[a]pyrene and TCDD (RL95-2 cells), **294**, 101
- Uterine epithelial cells  
 MUC1 metabolic complex formation (HES cells), **293**, 1183
- Uteroglobulin  
 $\alpha$ -helix 3 Lys43 and Asp46, role in phospholipase A<sub>2</sub>-inhibitory activity, **295**, 877
- Uterus  
 nuclear type II [<sup>3</sup>H]estradiol binding sites, identification as histone H4 (rat), **296**, 1083
- UTP  
 induction of Ca<sup>2+</sup> influx through store-operated calcium channels, effect of actin cytoskeleton, **296**, 484
- Utrophin  
 interaction of ABCA1 carboxyterminus with  $\beta$ 2-syntrophin/utrophin complex, **293**, 759
- Uveitis  
 endotoxin-induced, NOSII gene expression in, downregulation by iontophoresis of antisense oligonucleotide, **295**, 336
- uvi15*<sup>+</sup>  
 pre-mRNA, in fission yeast, fibrillar binding to 3' *cis*-regulatory element in, **294**, 1184
- V
- V-1  
 expression in atrial myocytes of Dahl salt-sensitive rat, enhancement by hypertension, **298**, 793
- V3 domain  
 HIV-1, ionic interaction with CCR5 and deregulation of T cell function, **298**, 574
- V3 loop  
 peptides derived from, activation of HIV-1 gp120, **297**, 625
- VacA toxin  
*Helicobacter pylori*-induced internalization in human gastric epithelial cells, effect of acidic extracellular pH, **292**, 167
- Vaccine  
 edible, against anthrax, step toward: protective antigen expression in transgenic plants, **299**, 345
- Vacuolar ATPase  
 inhibition by hygroline: induction of p21, **298**, 178  
 subunit E expression, purification, and characterization, **298**, 383
- Vacuolation  
*Helicobacter pylori*-induced, and VacA internalization, in human gastric epithelial cells, effect of extracellular pH, **292**, 167
- Vacuole membrane protein 1  
 in pancreas with acute pancreatitis, cloning, expression, and promotion of vacuole formation (rat), **290**, 641
- Vacuoles  
 formation, promotion by vacuole membrane protein 1 (rat), **290**, 641
- Valine  
 activation by fengycin synthetase FenE, **292**, 789  
 at C-terminus, dipeptides with, production by L- $\delta$ -( $\alpha$ -aminoacyl)-L-cysteine-D-valine synthetase, **292**, 794  
 Val 138 key role in differential coupling of  $\alpha$ 1-adrenergic receptor subtypes to Gs, **299**, 142
- Valproate  
 effects on interleukin-18 gene expression in myeloid cells, **292**, 937
- Vanadate  
 glucose transport stimulated by, impairment by glucosamine, **292**, 308
- Vanadium  
 and molybdenum: comparison of biologic properties, **292**, 293  
 V(III), V(IV), and V(V), binding patterns to human serum transferrin, HPLC/high-resolution ICP-MS, **296**, 1207
- Vancomycin  
 synergistic effect of  $\alpha$ -helical antimicrobial peptide P18 with, **290**, 558
- Vanilloid receptor-1  
 cloned, thapsigargin binding to and inhibition of, **293**, 777
- Vanilloid receptors  
 functional, in cultured normal epidermal keratinocytes (human), **291**, 124
- Vanin  
 mammalian, carbon-nitrogen hydrolase domains, squid photoprotein with sequence similarity to, **293**, 874
- Vascular cell adhesion molecule-1  
 interleukin-4-activated expression, phytochemical inhibition, **292**, 841  
 NF- $\kappa$ B-mediated induction by TNF- $\alpha$  in endothelial cells, regulation by atrial natriuretic peptide, **295**, 1068  
 overexpression during pancreas regeneration (rat), **299**, 806
- Vascular endothelial growth factor  
 activation, effect of cyclooxygenase-2 overexpression in tumor cells, **299**, 886  
 expression in bovine retinal pericytes, effects of advanced glycation end products, **290**, 973  
 sorbitol dehydrogenase overexpression, **299**, 183  
 expression in skeletal muscle ECs of NOS-knockout mice during prazosin-induced angiogenesis, **297**, 1270  
 gene induction, effects of nitric oxide donors, **296**, 976  
 high-glucose-induced expression via PKC and ERK in glomerular podocytes, **290**, 177  
 induction of IP-10 chemokine expression in penis tissue and cultured cells (rat), **292**, 79  
 levels in retinal and brain-derived endothelial cells, **293**, 710  
 mRNA  
 isoforms, expression and stability in ovarian cancer cells, effects of glucose starvation (mouse), **292**, 860



- stabilization by hypoxia-inducible factor 1, **291**, 908
- vascular permeability response to, attenuation by loss of placental growth factor (mouse), **295**, 428
- Vascular endothelial growth factor-1
- soluble, in mammals, phylogenetic conservation in avians, **291**, 554
- Vascular endothelial growth factor receptor
- levels in retinal and brain-derived endothelial cells, **293**, 710
- Vascular permeability
- endothelial and mesothelial cell hyperpermeability, induction by tumor autocrine motility factor, **293**, 192
- in pathological conditions, protective effect of loss of placental growth factor, **295**, 428
- peptide enhancing, release from kininogens by human neutrophil elastase, **294**, 423
- Vascular smooth muscle cells
- angiotensin II-induced hypertrophy, prevention by quercetin glucuronide via inhibition of JNK and AP-1 signaling pathways, **293**, 1458
- aortic
- methylglyoxal-AGE synthesis, role of semicarbazide-sensitive amine oxidase (bovine), **297**, 863
- osteoprotegerin gene expression, inhibition by activation of PPAR $\gamma$  (human), **294**, 597
- arterial, expression of and adhesion to laminin-5, effects of PDGF-BB (rat), **294**, 1017
- ATP-sensitive K<sup>+</sup> channels in, molecular basis (rat), **296**, 463
- chemical induction of cellular antioxidants and protective effect against oxidative injury (A10 cells), **292**, 50; *erratum*, **294**, 1192
- effect of TGF- $\beta$  receptor-binding peptides, **293**, 1279
- GADD153* gene induction by oxidative stress, mechanism, **290**, 1255
- $\beta_1$ -integrin activation by hypoxia via ERK1/2 and p38 MAP kinase (human), **296**, 890
- migration
- AngII-induced, blocking by metalloproteinase inhibitor via inhibition of EGF receptor transactivation, **294**, 1023
- role of phosphoinositide 3-kinase C2 $\alpha$ , **297**, 261
- signal cascades mediating, triggering by hepatocyte growth factor, **298**, 80
- sphingosine 1-phosphate-induced, enhancement by EDG-5 antagonist, **299**, 483
- p21-activated kinase stimulation by lysophosphatidic acid, **291**, 687
- PDGF-BB-stimulated proliferation and migration on laminin-5, mediation by ERK1/2, **293**, 1000
- Vasculogenic mimicry
- potential relevance of TEL-induced aggregation and tube formation in NIH3T3-UCLA cells, **291**, 820
- Vasoactive intestinal contractor
- increased expression in mammary gland of lactating mice, **297**, 1339
- Vasoactive intestinal peptide
- inhibition of CBP–NF- $\kappa$ B interaction in activated microglia, **297**, 1181
- MUC5AC secretion from pancreatic cancer cells in response to, **294**, 680
- and PACAP, effects on MEKK1/MKK4/JNK cascade in endotoxin-activated microglia, **293**, 771
- promoter, phase-gated induction by glutamate in immortalized suprachiasmatic nucleus cell line, **298**, 133
- Vasoactive intestinal peptide receptor
- VPAC<sub>1</sub>, G proteins coupling to, identification, **290**, 1300; *erratum*, **293**, 1580
- Vasoconstriction
- cavernosal, effect of adeno-associated virus-mediated gene transfer of dominant negative RhoA (rat), **298**, 427
- Vasodilation
- arteries, induction by leukemia inhibitory factor via endothelium-dependent mechanism, **294**, 359
- Vasoprotection
- YC-1-mediated, through inhibition of smooth muscle cell proliferation and platelet function, **291**, 1014
- Vasorelaxation
- induction by resveratrol activation of membrane-bound guanylyl cyclase in coronary arterial smooth muscle, **291**, 1218
- Vault poly(ADP-ribose) polymerase
- structural domains, role in vault assembly, **291**, 535
- Vault proteins
- structural domains: role of coiled coil domain in vault assembly, **291**, 535
- VCY2
- interaction with HECT domain of ubiquitin–protein ligase E3A, **296**, 1104
- VDUPI
- mRNA, overexpression of, effect on HeLa cell sensitivity to paraquat, **293**, 293
- Venom
- scorpion, linear peptides from, purification, structure-function analysis, and molecular characterization, **293**, 1514
- sea anemone nematocyst, proteinaceous toxins from, isolation and bioactivities, **294**, 760
- snake
- Bothrops jararaca* and *B. moojeni*, metalloproteinases in, generation of angiotensin-like molecules by, **294**, 879
- Naja kaouthia*,  $\beta$ -nerve growth factor crystallization and preliminary X-ray diffraction studies, **297**, 1008
- Ophiophagus hannah*, purification and characterization of neurotoxin from, **294**, 574
- spider *Loxosceles laeta*, dermonecrotic and hemolytic factor from, molecular cloning and expression, **298**, 638
- Ventricular tachycardia
- stress-induced polymorphic, associated mutations in RyR2 calcium channel, effects on binding to FKBP12.6, **299**, 594
- Veratryl alcohol
- mediation in oxidations promoted by lignin peroxidase: lifetime of radical cation, **293**, 832
- reaction of Compounds I and II with, spectrophotometric studies with hexa-coordinate ferric lignin peroxidase, **297**, 406
- v-erba
- dimerization on inverted repeats, **294**, 35
- Verprolin homology domains
- and Arp2/3 complex-mediated actin polymerization activities of N-WASP and WAVE1 C-terminal regions, **297**, 214
- WICH protein with, cooperative function with N-WASP in actin-microspike formation, **291**, 41
- Vertebrate ancient opsin
- isoform Pal-VAM, cloning from smelt *Plecoglossus altivelis*, **290**, 280
- Very-long-chain fatty acids
- thioesterase specific for, expression in perfused hearts, control by  $\beta$ -adrenergic stimulation, **299**, 135
- Very-low-density lipoprotein
- apoB secretion, suppression by insulin, role of LDL receptor, **297**, 134
- Very-low-density lipoprotein receptor
- myocardial, uptake of remnant lipoprotein particles, **293**, 1007
- role in tissue factor pathway inhibitor induction of *JUNB* and *GADD45B* mRNA expression, **299**, 847
- Vesicle-associated membrane protein-2
- downregulated expression in pancreatic islets of diabetic GK rat, **291**, 1038
- Vesicles
- ATP-dependent transport by, as mechanism of resistance to indolocarbazole compounds conferred by ABCG2, **299**, 669
- cardiac muscle, fatty acid translocase/CD36 and GLUT4 localization (rat), **293**, 665



- COPII**  
 budding from endoplasmic reticulum, relationship to unfolded protein response, **296**, 560  
 formation from endoplasmic reticulum, genetic link to unfolded protein response, **296**, 568  
 liver membrane, insulin receptor colocalization with G<sub>q/11</sub> (rat), **295**, 561  
 rGPIb $\alpha$ -conjugated phospholipid, with different flexibilities, rolling on vWF surface, **296**, 765
- Vesicular stomatitis virus**  
 recombinant RNA polymerase, capping activity of, **293**, 264
- WHL protein**  
 identification of deubiquitinating enzyme subfamily as substrates of, **294**, 700
- Vibrio cholerae**  
 genes, base frequencies at second codon position, and protein function, **290**, 81  
 motility, adherence to epithelial cells, and conjugation frequency, role of in vivo induced *icmF* gene, **295**, 922
- Vibrio harveyi**  
*rpoS* gene, cloning, sequencing, and functional studies, **293**, 456
- Vibrio mimicus**  
 phospholipase A, characterization and cytotoxicity to fish cell line, **298**, 269
- Vibrio vulnificus**  
 cytolysin, induction of nitric oxide synthase expression, **290**, 1090
- Videomicroscopy**  
 functionalized gold colloids for single particle tracking experiments, **295**, 610
- Vif**  
 HIV-1, peptide derived from, inhibition of drug-resistant HIV proteases, **292**, 832
- Vimentin**  
 expression in intervertebral disc cells subjected to altered osmolarity, **293**, 932
- Vinculin**  
 human uterine RL95-2 cell, effects of benzo[a]pyrene and TCDD, **294**, 101  
 intact protein, requirement for control of cell shape and mechanics and *rac*-dependent lamellipodia formation, **290**, 749
- VIP**, *see* Vasoactive intestinal peptide
- Viral packaging**  
 expected role of stable RNA aptamer against HIV-1 nucleocapsid protein, **291**, 925
- Virus-like particles**  
 hepatitis C virus core, in vitro self-assembled, induction of strong antibody response in sheep, **290**, 300
- Visinin-like protein-1**  
 calcium-binding EF-hand motifs, functional analysis, **296**, 827
- Vitamin B<sub>1</sub>**  
 and phosphate esters of, simultaneous detection from microalgae by HPLC, **291**, 344
- Vitamin C**  
 effects on glycated albumin cytotoxicity to retinal pericytes (bovine), **292**, 1010  
 oral, effects on monocyte adhesion to endothelial cells (human), **294**, 1161  
 plasma, effect of smoking, **292**, 175
- Vitamin D<sub>3</sub>**  
 and analogs, modulation of expression of CSF-1 and receptor in human dendritic cells, **297**, 1211  
 augmentation of osteoclastogenesis via vitamin D-responsive element of mouse RANKL gene promoter, **290**, 650  
 pathway, modulation of dendritic cells, **297**, 645
- Vitamin D analog**  
 ZK 156718, low-calcemic antiproliferative prodifferentiating, **290**, 504
- Vitamin D-24-hydroxylase**  
 gene, characterization of transgenic rats constitutively expressing, **297**, 1332
- Vitamin D receptor**  
 associated negative vitamin D response sequence, localization in human growth hormone gene, **292**, 250  
 CYP3A4 mRNA induction in Caco-2 cells mediated by, effect of alteration of cellular phosphorylation state, **296**, 182  
 liganded, induction of CYP3A4 in small intestinal and colon cancer cells via DR3 and ER6 vitamin D responsive elements, **299**, 730
- Vitamin D response elements**  
 DR3 and ER6, role in CYP3A4 induction by liganded vitamin D receptor in small intestinal and colon cancer cells, **299**, 730  
 localization of negative vitamin D response sequence in human growth hormone gene, **292**, 250  
 in mouse RANKL gene promoter, role in augmentation of osteoclastogenesis by vitamin D<sub>3</sub>, **290**, 650
- Vitamin E**, *see*  $\alpha$ -Tocopherol
- Vitiligo**  
 pathogenesis, role of oxidative stress: H<sub>2</sub>O<sub>2</sub> and pterin-6-carboxylic acid production by pterin photooxidation, **292**, 805
- Vitronectin**  
 role in regulation of plasminogen activator inhibitor-1 gene expression in anchorage-dependent cells, **291**, 185  
 truncated, binding to immobilized fibrin and fibrin clots and subsequent interactions with cells, **290**, 682
- von Hippel–Lindau tumor suppressor**  
 identification of deubiquitinating enzyme subfamily as substrates of, **294**, 700
- von Willebrand factor**  
 surface, rolling of rGPIb $\alpha$ -conjugated phospholipid vesicles with different membrane flexibilities, **296**, 765
- VP22**  
 herpes simplex virus, apparent cell membrane translocation, **291**, 367
- Vpr**  
 HIV-1, glucocorticoid receptor coactivator activity and cell cycle arresting activity, effects of TFIIF components, **298**, 17
- v-Src**  
 cells transformed by, protrusions in, stimulation by phospholipase D2, **293**, 201
- v-src oncogene**  
 fibroblasts transformed by, increased activity of c-Src and Csk in, **290**, 790
- W**
- Walker, John E.**  
 interview, **298**, 1
- WAP domain**  
 protease inhibitor highly expressed in prostate with, gene identification: *huWAP2*, **290**, 452
- WASP**  
 C-terminal region, Arp2/3 complex-mediated actin polymerization activity, effects of verprolin homology domains, **297**, 214
- Water**  
 intake by rat, effects of centrally administered apelin-13, **291**, 1208
- Water retention**  
 at active site, effect on catalysis with hexa-coordinate ferric lignin peroxidase, spectrophotometry, **297**, 406
- WAVE1**  
 C-terminal region, Arp2/3 complex-mediated actin polymerization activity, effects of verprolin homology domains, **297**, 214
- WAVE2**  
 regulation of IRSp53 interaction with Rac, **293**, 93

- Western blotting  
CD95 detection, specificity of anti-human CD95 antibodies for, **297**, 459
- Westheimer, Frank  
interview, **296**, 5
- White tea  
inhibition of  $\beta$ -catenin/Tcf activity, relationship to  $H_2O_2$  generation, **296**, 584
- WICH  
cooperative function with N-WASP in actin-microspike formation, **291**, 41
- Wilms' tumor 1 protein  
downregulation, effect on breast cancer proliferation, **295**, 784
- Wnt-1  
promotion of neuronal differentiation and inhibition of gliogenesis in P19 cells, **293**, 167
- Wnt-1 inducible signaling pathway protein 1  
overexpression during pancreas regeneration (rat), **299**, 806
- Wnt-1 inducible signaling pathway protein 2  
as marker for screening environmentally relevant compounds for estrogenicity in MCF-7 cells, **294**, 602
- Wortmannin  
potentiation of MMP-9 expression in C6 glioma cells, **296**, 864
- Wound healing  
 $\beta$ ig-h3 support of keratinocyte adhesion, migration, and proliferation through  $\alpha\beta$ 1 integrin, **294**, 940
- Wounding  
leaves by cutting, associated octadecanoid signaling component burst (rice), **295**, 1041  
muscle in vitro, increased MAPK signaling during, **293**, 112  
skin, vascular leakage induced by, reduction by loss of placental growth factor (mouse), **295**, 428
- WWP1  
domain structure, effect of alternative splicing, **290**, 431
- Wy-14643  
delayed induction of  $\Delta$ -5 and  $\Delta$ -6 desaturases, **299**, 832  
gene expression changes in mouse liver induced by, microarray analysis, **290**, 1114
- X
- xanA*  
*Xanthomonas campestris*, mutation in, reduction of efficiency of bacteriophage L7 adsorption, **291**, 338
- Xanthan  
synthesis, mutation in *Xanthomonas campestris xanA* gene required for, and phage L7 adsorption efficiency, **291**, 338
- Xanthenyl ring  
HIV-1 nucleocapsid protein:nucleic acid antagonists with, with cellular anti-HIV activity, identification, **296**, 1228
- Xanthine oxidase  
flavonoids inhibiting, molecular modeling, **294**, 167
- Xanthomonas campestris*  
effects of organic peroxides, roles of alkyl hydroperoxide reductase and Ohr in, **299**, 177  
*prtI* gene encoding protease 1, transcription increase during stationary phase and role of Clp, **295**, 43; *erratum*, **296**, 1034  
*xanA* gene, mutation in, reduction of efficiency of bacteriophage L7 adsorption, **291**, 338
- Xanthomonas campestris* pv. *phaseoli*  
menadione toxicity, transaldolase protective effects, **297**, 968
- XPB/TREB5  
human, related B-ZIP transcription factor HTF activated by hepatocellular carcinoma in rat, **223**, 746; *erratum*, **297**, 425
- Xbr-1a/Xvent-2 homeobox gene  
transcriptional regulation: promoter region analysis, **298**, 815
- X chromosome  
cancer/testis antigen gene *CAGE* localization on Xp22 (human), **292**, 715  
cyclin B3 gene mapping at Xp11.2 (human), **291**, 406
- Xenoestrogen  
screening in MCF-7 cells using WISP-2 as marker, **294**, 602
- XPB  
TFIIH, association of human RAD52 protein with, **297**, 1191
- XPB  
TFIIH, association of human RAD52 protein with, **297**, 1191
- X-ray crystallography  
hen serotransferrin in apo- and halo-forms, **295**, 125
- X-ray diffraction  
HIV-1 protease: effects of remote mutation on autolysis rates, **294**, 395  
 $\beta$ -nerve growth factor, preliminary studies (cobra venom), **297**, 1008
- X-ray irradiation  
apoptosis induced by  
DLD-1 cells, augmentation by caspase-8 gene transduction, **292**, 347  
Ku80-deficient *xrs5* cells, suppression by power frequency magnetic fields, **292**, 355  
sensitivity of salivary gland cancer cells to, enhancement by cytoplasmic TSC-22, **292**, 957
- Y
- Yarrowia lipolytica*  
cytochrome P450ALK1, *YIALK1* encoding, transcriptional induction by *n*-alkane via distinct *cis*-elements on promoter, **294**, 1071
- yba* genes  
orphan genes *yba2*, *yba3*, and *yba4* of *Buchnera*, experimental validation, **292**, 263
- Y-box protein gene  
Chk-YB-1b, allele of, targeted disruption in DT40 cells resulting in cell cycle defects, **296**, 451
- YC-1  
mediation of vascular protection via inhibition of smooth muscle cell proliferation and platelet function, **291**, 1014
- Yeast  
hydroxy fatty acids, and fungal polyketides: Konrad Bloch special issue, **292**, 1213  
lead and iron uptake by divalent metal transporter 1, **295**, 978  
meiotic cells, supercomplex formation between Mlh1-Mlh3 and Sgs1-Top3 heterocomplexes, **296**, 949  
plasmid autonomously replicating sequence and chromosomal replication origin, silkworm rDNA nuclear matrix attachment region function as, **299**, 723
- Yeast genome sequence  
and greed, editorial, **297**, 161
- Yeast two-hybrid system  
assay of direct binding of *Drosophila* TGF- $\alpha$ -like protein gurken to EGF-receptor homolog Egfr, **291**, 731  
calmodulin interaction with protein serine/threonine phosphatases with EF-hand domains, **293**, 1047  
functional screening method using, isolation of molecules interacting with GEX-3, **292**, 697  
homeodomain interacting protein kinase 2 association with Ran-binding protein, **297**, 148  
interaction of EGF-like homeotic protein dlk with growth-modulating modules in, **291**, 193  
RyR2 calcium channel binding to FKBP12.6, effects of ARVD2 and VTSIP mutations, **299**, 594  
screening of leukocyte library: phospholipase C- $\beta$ 2 interaction with mitogen-activated protein kinase kinase 3, **293**, 647



- Yellow protein  
and male-specific Fruitless, immunohistochemical colocalization in *Drosophila melanogaster* neuroblasts, **293**, 1262
- Yersinia enterocolitica*  
YplA, active recombinant derivatives of, purification and characterization, **292**, 463
- Ynfia  
associated with ribosomes of *Escherichia coli*, solution structure, **299**, 710
- Yip1p  
interaction with *Saccharomyces cerevisiae* Pra1p/Yip3p, **290**, 676
- YlALK1  
encoding P450ALK1 in *Yarrowia lipolytica*, transcriptional induction by *n*-alkane via distinct *cis*-elements on promoter, **294**, 1071
- YnfL amino acid transporter-1  
green fluorescent protein-tagged normal and mutant forms, expression in mammalian cells, **291**, 1173
- YnfLA  
recombinant, active derivatives of, purification and characterization (*Yersinia enterocolitica*), **292**, 463
- Z
- ZAK  
MKK7-utilizing, activation of c-Jun N-terminal kinase and role in cell arrest, **297**, 105
- ZASP-CH<sub>2</sub>-DCB  
cellular mechanism reversibly inactivating: discrepancy between *in vitro* and *in vivo* caspase assays, **291**, 1022
- Z curve method  
single replication origin of archaeon *Methanosarcina mazei* revealed by, **297**, 396
- Zellweger syndrome  
aberrant splicing mutation of *PEX16* gene in two patients with, **292**, 109
- Zfhfp transcription factor  
cell-specific phosphorylation, **296**, 368
- Zinc  
bivalent ions, inhibition of glycogen synthase kinase-3 $\beta$ , **295**, 102  
depleted airway epithelial cells, caspase activation, role of redox events (A549 and NCI-H292 cells), **297**, 1062  
intracellular distribution and transport in C6 glioma cells, **296**, 923  
phytochelatin synthesis induced by, and *Dunaliella tertiolecta* tolerance of heavy metals and oxidative stress, **293**, 653  
role in imide hydrolysis (pig), **297**, 1027
- Zinc finger domain  
DHHC, Golgi-specific GODZ with, isolation and characterization, **296**, 492
- Zinc finger genes  
*ZNF359* and *ZFP28*, identification and characterization in human development, **295**, 862
- Zinc finger homeodomain enhancer-binding protein  
cell-specific phosphorylation, **296**, 368
- Zinc finger proteins  
amino acid numbers between two ligand cysteines of, effect on DNA binding affinity and specificity, **296**, 553  
KRAB-containing ZNF304, identification by AU-motif-directed display and characterization in lymphocyte activation, **293**, 1066  
TIS11, identification of nuclear import and export signals within structure of, **293**, 1242  
transcription factor MTF-1, molecular cloning and developmental gene expression (zebrafish), **291**, 798  
Znf131, with BTB/POZ domain, expression in developing central nervous system and adult brain, testis, and thymus, **296**, 319
- Zinc fingers  
SCAN/(Cys)<sub>2</sub>(His)<sub>2</sub> zinc finger transcription factor *ZNF323* in early human embryonic development, **296**, 206
- Zinc-fingers and homeoboxes 1  
functional analysis and molecular dissection, **297**, 368
- ZK 156718  
low-calcemic antiproliferative prodifferentiating vitamin D analog, **290**, 504
- Z-line proteins  
titin binding to, reduction caused by titin mutations in dilated cardiomyopathy, **291**, 385
- ZNF323*  
SCAN/(Cys)<sub>2</sub>(His)<sub>2</sub> zinc finger transcription factor in early human embryonic development, **296**, 206
- ZNF382*  
expression in human heart, **299**, 606
- ZntR  
from *Escherichia coli*, directed amino-acid alterations in, functional analysis, **299**, 438
- Zoledronic acid  
stimulation of osteoprotegerin production by primary osteoblasts (human), **291**, 680







# GENETICS OF MOVEMENT DISORDERS

EDITED BY

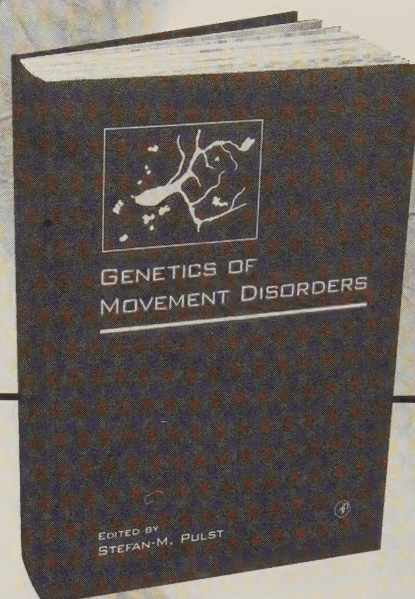
**STEFAN M. PULST**

**H**ereditary or genetic diseases featuring involuntary movements constitute a major aspect of the practice of neurology, functional neurosurgery, genetics, and many areas of basic and applied neuroscience research. Describing the current knowledge on these disorders, **Genetics of Movement Disorders** brings together information essential for clinicians, geneticists, and neuroscientists in one source. Utilizing a convenient and accessible format, the book is designed to allow easy identification of relevant information, with the overall organization of topics following established phenotypic classifications of movement disorders such as Parkinsonian syndromes, chorea, ataxia, and major categories of diseases grouped by gene locus. This book broadly appeals to neurologists, neuroscientists, geneticists, as well as cell and molecular biologists and hematologists.

## KEY FEATURES

- ♦ Consistently formatted to present a clinical description of the disorder, followed by an in-depth analysis of the mutation and function of the mutated gene including cellular and animal models
- ♦ Emphasizes the use of DNA tests for each respective disorder
- ♦ Provides up-to-date, easily accessible information for clinicians, geneticists, and neuroscientists

October 2002 , Hardback 561 pp.,  
\$129.95/£86.00, ISBN: 0-12-566652-7



## ORDERING

*In the U.S. and Canada:*

### ELSEVIER SCIENCE

Order Fulfillment Dept. DM27101  
11830 Westline Industrial Dr.  
St. Louis, MO 63146-9938  
Call Toll Free: 1-800-545-2522  
Tel: 1-314-453-7010  
Fax: 1-800-535-9935 or 1-314-453-7095  
E-mail: [custserv.ap@elsevier.com](mailto:custserv.ap@elsevier.com)

*All other countries:*

### ELSEVIER SCIENCE

Customer Service Dept.  
Foots Cray High Street  
Sidcup, Kent DA14 5HP, UK  
Tel: +44 (0)20 8308 5700  
Fax: +44 (0)20 8308 5702



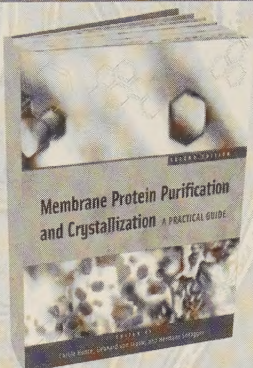
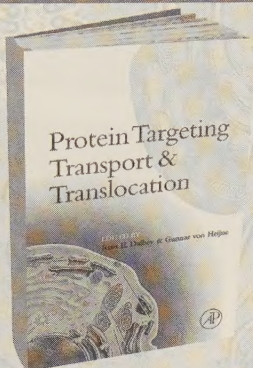
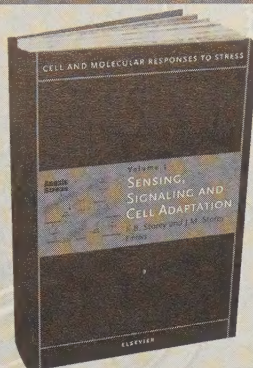
**ACADEMIC  
PRESS**

An imprint of Elsevier Science

*Find us on the web!*  
**[www.academicpress.com](http://www.academicpress.com)**  
**SECURE ORDERING ONLINE**

All prices and publication dates subject to change without notice. ©2003 by Elsevier Science.  
All Rights Reserved. KB/NA/LS-041121 1/03





## Useful BIOCHEMISTRY Books

from Elsevier Science  
and Academic Press  
(an imprint of Elsevier Science)

### Cell and Molecular Responses to Stress

Volume 3: Sensing, Signalling and Cell Adaptation

Volume 2: Protein Adaptations and Signal Transduction

Volume 1: Environmental Stressors and Gene Responses

Edited by

**Kenneth B. Storey and Janet M. Storey**

**Volume 3** includes articles that provide up-to-date information on key areas of signal sensing, signal transduction mechanisms, metabolic responses to stress, and selected protein adaptations that support unique physiological states. An analysis of metabolic control theory is provided as well as an examination of how enzymes evolve in the face of stress.

**Volume 2** focuses on oxygen sensitive ion channels, protein kinase cascade, and reactive oxygen species. Additionally, it covers protein adaptations that support unique physiological states.

**Volume 1** discusses environmental stress as an influence on geographic distribution and species divergence. It explores gene expression and metabolic responses to high and low temperature, osmotic, anoxia, desiccation, high pressure and heavy metal stresses.

- **Volume 3**, September 2002, Casebound, c. 346 pp., \$179.00/£115.25, ISBN: 0-444-51147-4 (Elsevier Science)
- **Volume 2**, July 2001, Casebound, c. 291 pp., \$179.00/£115.25 ISBN: 0-444-50759-0 (Elsevier Science)
- **Volume 1**, July 2000, Casebound, c. 303 pp., \$179.00/£115.25 ISBN: 0-444-50488-5 (Elsevier Science)
- Special! Purchase three volumes for the price of two! \$358.00/£230.50, ISBN: 0-444-51282-9 (Elsevier Science)

### Protein Targeting Transport and Translocation

Edited by

**Ross E. Dalbey and Gunnar von Heijne**

This book is a must for researchers working in all areas of protein science including protein targeting, secretion, folding, assembly, structure, localization, quality control, degradation and antigen presentation. Foreword by Professor Gunter Blobel, Nobel Prize winner for physiology and medicine in 1999.

April 2002, Casebound 424 pp., \$69.95/£44.95, ISBN: 0-12-200731-X (Academic Press)

### Membrane Protein Purification and Crystallization

A Practical Guide, 2E

Edited by

**Carola Hunte, Hermann Schägger, and Gebhard von Jagow**

This second edition presents isolation and crystallization techniques in a concise form, emphasizing the critical aspects unique to membrane proteins. It explains the principles of the methods and provides protocols of general use, permitting researchers and students new to this area to adapt these techniques to their particular needs.

September 2002, Spiralbound c. 260 pp., \$69.95/£42.95, ISBN: 0-12-361776-6 (Academic Press)

### New titles in the Advances in Protein Chemistry Series

#### Praise for the Series

*"The authority, originality, and editing of the reviews are first class."*

—NATURE

*"The Advances in Protein Chemistry series has been a major factor in the education of protein chemists."*

—JOURNAL OF THE AMERICAN CHEMICAL SOCIETY

- **Unfolded Proteins, Vol. 62**, November 2002, Casebound, c. 424 pp, \$129.95/£85.95 ISBN: 0-12-034262-6 (Academic Press)
- **Protein Modules and Protein-Protein Interactions, Vol. 61**, October 2002, Casebound, c. 336 pp, \$129.95/£85.95 ISBN: 0-12-034261-8 (Academic Press)
- **Copper-Containing Proteins, Vol. 60**, August 2002, Casebound, 550 pp, \$129.95/£85.95 ISBN: 0-12-034260-X (Academic Press)
- **Protein Folding in the Cell, Vol. 59**, February 2002, Casebound, 550 pp, \$129.95/£85.95 ISBN: 0-12-034259-6 (Academic Press)

#### TO ORDER ACADEMIC PRESS BOOKS:

In North America:

1-800-545-2522 or 1-314-453-7010

E-mail: [custserv.ap@elsevier.com](mailto:custserv.ap@elsevier.com)

Secure Online Ordering at

[www.academicpress.com](http://www.academicpress.com)

All other countries:

+44 (0)20 8308 5700

Secure Online Ordering at

[www.elsevier-international.com](http://www.elsevier-international.com)

#### TO ORDER ELSEVIER SCIENCE BOOKS:

In North America:

1-888-437-4636 or 1-212-633-3730

E-mail: [usinfo-f@elsevier.com](mailto:usinfo-f@elsevier.com)

All other countries:

+31 (0)20 485 3757

E-mail: [nlinfo-f@elsevier.com](mailto:nlinfo-f@elsevier.com)

Secure Online Ordering at

[www.elsevier.com](http://www.elsevier.com)



ACADEMIC PRESS  
An imprint of Elsevier Science